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THE

QUARTERLY WEATHER REPORT

OF THE

METEOROLOGICAL OFFICE

For the Year 1876.

(NEW SERIES.)

Published by the Authority of the Meteorological Council.

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QUARTERLY WEATHER REPORT, 1876. (PARTS I. AND II.)

ERRATA.

Page 26. List of stations, for "Hawes," read "*Hawes."
„ „ Hull. Absolute minimum temperature, for "20·0," read "25·0."
„ „ Folkestone. Insert:—"NOTE.—Six minimum temperatures and five maximum temperatures are interpolations."
„ 27. Strathfield Turgiss. Wind, number of gales, for "1," read "0."
„ „ Folkestone. Rainfall, date of maximum, for "22nd," read "21st."
„ 31. Stonyhurst. Temperature, date of minimum, for "15th," read "11th."
„ 32. Folkestone. Mean maximum, and minimum and maximum combined, for "42·9," "39·4," read "43·9," "39·9."
„ 33. Sandwick. Rainfall maximum, for "·380," read "·580."
„ „ Glenalmond. Wind, under E., S.E., S.W., and N.W., for "6, 6, 8, 4," read "8, 8, 9, 5."
„ „ Seaham. Wind, number of calms, read "2."
„ „ Folkestone. Weather, number of rainy days, for "19" read "20." Wind, number of observations under S.W., for "9," read "19."
„ „ Hawes. Rainfall, total, for "8·190," read "8·910."
„ 38. Ramsgate. Mean barometer, for "29·511," read "29·591."
„ „ Caermarthen. Mean minimum temperature. Insert:—"NOTE.—Mean of 30 days only."
„ 39. Glenalmond. Wind, under E., S., and S.W., for "1, 5, 19," read "3, 6, 20."
„ „ Seaham. Wind, number of observations under S.W., for "10," read "20."
„ „ Folkestone. Weather, number of rainy days, for "19" read "18."
„ „ Markree Castle. Tension of vapour 9 a.m., for "·313," read "·213."
„ 53. Valencia. Pressure range, for "1·753," read "1·573."
„ 55. Glenalmond. Wind, under S., W., and N.W., for "5, 6, 5," read "6, 8, 6."
„ „ Folkestone. Rainfall, date of maximum, for "13th," read "12th."
„ 60. Hull. Air temperature, 9 a.m., for "51·6," read "51·4."
Pages 61 and 67. Uppingham. Tension of vapour and relative humidity, insert:—"NOTE.—These values are approximate."
Page 61. Folkestone. Rainfall, date of maximum, for "25th," read "24th."
„ 66. Uppingham. Mean minimum temperature insert:—"NOTE.—9 min. readings are interpolations."
„ 67. Glenalmond. Wind, under S.E., for "4," read "5."
„ „ Hull. Rainfall total, for "2·910," read "1·910."
„ „ Strathfield Turgiss. Wind, number of observations, under W., for "2," read "12."
„ „ Folkestone. Rainfall, date of maximum, for "24th," read "23rd."
„ „ Parsonstown. Weather, number of days of overcast, for "10," read "11."

NOTE.—The Meteorological Society stations are indicated *only* on p. 26, January.

CORRECTION TO MEAN MONTHLY BAROMETRIC PRESSURE, 1876.

Page 56. Scilly - April: "29·858" in place of "29·900."
„ 34. Holyhead. February: "29·707" in place of "29·749."
„ 56. „ April: "29·817" in place of "29·823."

Pages 11, 12

missing

PREFACE.

THE Quarterly Weather Report in the present volume has undergone a considerable modification in form, as is indicated by its being termed a "New Series." The principal details of the changes are explained in the Introductory Remarks, page 1. The text is accompanied by a series of 21 copperplate chart plates, giving for each day two charts, for 8 a.m. and 6 p.m.

There are three special Appendices, giving respectively:—

A. The comparison between the Greenwich and Kew curves for the year 1875;

B. The results of observations made at the Pagoda, Kew Gardens, to determine the influence of height on Air Temperature, &c.;

C. A comparison of the results obtained from the photographic curves by means of the Harmonic Analyser, with similar results obtained by measurement and numerical calculation.

July 1884. ROBERT H. SCOTT.

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(II.) A Monthly Weather Chart, containing four maps of small size, which exhibit:—

(1.) The Distribution of Mean Pressure, shown by isobars, drawn for each half-tenth of an inch, the mean barometric readings employed being those for 8 a.m. recorded at our Telegraphic Reporting Stations; but the mean pressure for the month at each Observatory, derived from 24 hourly readings each day, is inserted on the map close to the geographical position of the Observatory.

(2.) The Movements of the Depressions are shown in the following manner. The position of the centre of each of the chief depressions is determined as nearly as possible for 8 a.m. and 6 p.m. on each day during which the depression was within the area of our information; and these points are united by straight lines. The lines have arrow-heads drawn on them, showing the directions of the movements.

(3.) The Distribution of Mean Temperature, shown by isotherms, drawn for each degree Fahrenheit; the mean temperatures employed being the numerical means of the maxima and minima for each day recorded at the Stations of the Second Order and the Telegraphic Reporting Stations. The mean temperature for each of the Observatories, derived from 24 hourly readings each day, is also inserted. A correction at the rate of 1° F. for each 300 feet of vertical height has been added to the mean values in order to reduce them to the sea level.

(4.) The Rainfall chart shows in figures the Total Amount of Rain recorded during the month at each station. The values are inserted in inches and tenths, and each value is plotted close to a dot, indicating the geographical position of the station to which it refers.

When both an Observatory and a Telegraphic Reporting Station are situated at the same place, the value for the Observatory has been used in preference to that for the Telegraphic Reporting Station, but both values are given in the tables.

In preparing the Chart Plates the isobars have been drawn, as a rule, for each alternate tenth of an inch; but when the difference between the highest readings reported and the highest isobar at any given time exceeds a tenth of an inch, the approximate value of such highest pressure is stated in figures, which are placed in their proper position on the map.

A broken, or dotted, isobar indicates uncertainty as to its course, owing to deficiency of information.

The prevalent winds are shown by arrows, which are drawn flying with the wind. The force is indicated by the number of barbs and feathers thus: ⋙⟶ = a violent gale, (for Forces above 10 on the Beaufort scale); ≻⟶ = a gale (forces 8 to 10); ⟶ = a strong wind (forces 5 to 7); ⟶ = a light to moderate wind (forces 1 to 4); and ⊙ = a dead calm.

SECTION I.

GENERAL SUMMARY FOR THE QUARTER.

In the course of the Quarter there was considerable range in the indications of all the meteorological elements. Pressure was on one occasion as high as 30·9 inches over Northern Europe, and nearly 30·7 inches over our Islands, and on another as low as 27·96 inches in the extreme north of the British Isles. Temperature in the shade fell as low as 17° to 19° over much of the inland part of England towards the middle of January, but rose to between 60° and 62° over our south-eastern counties both in February and March. The wind has frequently blown severely from S.W. and S., and at other times from N.E. and E. The depressions have been of great size and though, as a rule, they moved in a north-easterly direction, and their tracks lay well to the northward of our extreme northern coast, there have been some instances in which the motion has been northerly, south-easterly, and even south-westerly; in the last case the systems were not very well marked and were of brief duration.

January 1st.—Pressure was high, except over and to the north-westward of the British Isles; the area of highest readings was found over Russia, extending thence in a S.W. direction to the southern part of France; the lowest readings being to the northward of Scotland. The prevailing wind-current was South-westerly. A shallow depression (No. I.) advanced from the westward over the southern parts of England during the night of the 1st, and travelling in an easterly direction reached North Germany by 8 a.m. on the 2nd, and eventually passed south-eastwards, and disappeared in the neighbourhood of the Black Sea.

January 2nd–3rd.—The high-pressure area extended itself over the eastern portion of the British Isles. Depression No. II. then arrived off our western coasts, travelled quickly in a northerly direction without spreading much, and passed off to the north-westward of the Hebrides on the 3rd.

January 4th–7th.—The northern end of the high-pressure area still lay over Russia and Scandinavia, whence an arm extended south-westwards to Denmark and the Netherlands. With this change the winds on our southern coasts became Southerly, South-easterly, and finally, Easterly, with cold weather; on the 7th they increased greatly at our southern stations, spread northwards, and blew a gale on our east coast.

January 8th.—The high-pressure area was moving a little to the southward, the Easterly winds were veering South-eastwards over the whole of our area, and blowing hard on our north-east coasts, snow and hail were falling on our east coast and in Scotland, and low temperature prevailed generally.

January 9th–14th.—The area of high pressure, having receded southwards, was joined by a second system which had been formed over the Atlantic. At the same time a depression (No. V.) appeared off our extreme N.W. coast. Its centre was, however, a long way from our islands and travelled in a north-easterly direction, so that although our northern district felt its South-westerly winds and a reduction of pressure, the precise track of the depression is not known. As the centre passed our northern coasts on the 12th, a subsidiary system appeared which stretched southwards from the Shetlands down the western side of the North Sea, accompanied by North-westerly winds, displacing the Easterly winds that had blown till the 11th.

The area of highest pressure, which had receded southward to France under the influence of this disturbance, spread northward again on the 13th, extending over the whole of our islands and the North Sea. A depression (No. VI.) appeared on January 13th over the northern part of the Mediterranean, and under its influence, and that of a subsidiary disturbance, which lay over the Channel, gradients for Easterly winds became steeper over France and the South of England.

January 15th–16th.—Barometric pressure began to give way in the extreme North, and the band of high readings across our islands again moved southwards, the winds to the northward of it being Westerly, and to the southward, Easterly. Temperature increased over the northern half of our area.

January 17th–21st.—A depression (No. VII.) appeared to the westward of the Hebrides on the 17th, travelling in an east-north-easterly direction; at 8 a.m. on the 18th, the centre bore east-north-east from Sumburgh Head, and was not many miles distant, and by 6 p.m. it had reached the southern part of Sweden. This was followed by another large disturbance (No. VIII.), which advanced from the south-westward and passed by our northern coasts to Scandinavia. At 8 a.m., 19th, its centre lay to the north-westward of Scotland, at 8 a.m., 20th, to the northward of the Shetlands, and at 8 a.m., 21st, off the Norwegian coast, near Christiansund. The passage of these disturbances was accompanied by a rise of several degrees in temperature.

A rapid rise of the barometer over the North of Scotland and Ireland on the night of the 20th was accompanied by the formation of a small low pressure area (No. VIII.*a*), which appeared off our south-west coasts at 6 p.m., 20th, whence it moved slowly to the eastward and grew deeper. At 8 a.m., 21st, its centre lay over Devon and Cornwall, and at 6 p.m. it had reached the Isle of Wight, whence the disturbance travelled to the north-eastern part of France by 8 a.m., 23rd, and dispersed. In its rear the barometer rose rapidly.

January 22nd to 31st.—Another depression (No. IX.) appeared at 6 p.m. on January 22nd to the north-westward of the Hebrides, and, travelling rapidly to the north-eastward, lay off the coast of Norway next morning. The rise of the barometer, which began on the 20th over Ireland, was continued during the two following days, accompanied by a fall of temperature, and then extended southward and eastward; the area of highest pressure was then established over France, a condition which lasted with little variation till the beginning of the following month.

During its continuance a large depression (No. X.) appeared to the north-westward of Scotland on the 23rd, whence it travelled quickly to the north-eastward. This was followed by a rapid rise of pressure on the night of the 24th, but by another fall next day, which was again succeeded by a sudden, local, and very remarkable increase of pressure off our West coasts on the night of the 27th, producing a shallow, local depression off the South-east of Ireland, which quickly dispersed.

Thus, after the first three days of the month to the 15th the high pressures lay mainly over the northern parts of our islands, but during the three first days, and after the 15th, to the southward.

February 2nd–3rd.—Pressure now began to recover over the Atlantic, and high southern with low northern readings were established over us. The wind, after blowing hard from South-west in most places during the night of the 2nd and early morning of the 3rd, veered round gradually to West and North-west, with a considerable fall of temperature.

With February 4th a change set in, pressure rising in the North and giving way in the S., so that gradients for North-westerly and Northerly breezes prevailed over us, followed by those for North-easterly winds, which began to appear during the afternoon of the 5th, and continued with us till the 8th. This period was marked by the prevalence of low temperature.

February 10th–12th.—Readings became very uniform over the British Islands, the winds light and variable, and the weather over Great Britain very cold and anticyclonic, while a very shallow depression lay over the South of Ireland.

February 13th–15th.—A change now took place, by the giving way of pressure in the West, and the setting in of strong South-westerly winds and rain on our western coasts. The new disturbance gradually assumed an elongated form, and by 8 a.m. on the 14th extended an arm of low pressure in an easterly direction from the Atlantic coasts across the southern half of England to Holland. This area lay between two high-pressure systems, one over northern, the other over southern Europe, so that an Easterly wind in the North, and a Westerly wind in the South prevailed simultaneously. There very quickly developed a large and deep depression (No. XIV.), whose centre lay partially over our north-western districts at 8 a.m. on the 15th, causing very severe south-easterly gales in the North and North-east of Scotland, while South-westerly gales and strong winds were felt over England.

February 16th.—The northern high pressure soon gave way, and the 16th found us with pressure varying from 30·3 ins. in the South of France to 29·0 ins. at Stornoway, near which a depression (No. XV.) was lying. High southern and low northern pressures continued with little variation for the rest of the month, during which time a number of depressions appeared over or near our northern districts, causing strong Southerly winds and mild weather as they advanced, and leaving North-westerly winds with sharp weather in their rear.

The month of March opened with high pressures over the Peninsula and South-west of France, and low pressures to the northward of our islands. These general conditions remained with us throughout the first half of the month, and during their prevalence several large depressions passed over or near our north-western and northern coasts, moving in a north-easterly or easterly direction, and giving us South-westerly to Westerly winds and showery weather; some of these were deep and very large (*e.g.*, those on 3rd and 6th), and others moved somewhat irregularly. One deserves special mention. It came to our north-western coasts on the morning of the 8th, and by 8 a.m. 9th lay over the Moray Firth, causing the barometer to fall to about 27·9 ins. in the North-east of Scotland. Here it hung for some time, but on the 10th began to move south-eastwards and to fill up somewhat. Several subsidiary depressions accompanied it in its course. At 8 a.m. its centre lay near the mouth of the Skager Rack, whence it moved in a North-easterly direction to Scandinavia. A serious complication now ensued. A small but very deep depression advanced to the South of Ireland during the night of the 11th, and travelled rapidly to the eastward across the South of England (see Chart Plate 4), as a secondary disturbance, its centre reaching our south-eastern counties by 1 p.m., and Holland by 6 p.m. (12th). This depression caused very heavy South-west to North-west gales over the southern counties, English Channel, and North of France (see Gale Table No. 2 on p. 17), and was accompanied by heavy falls of snow and rain. After its disappearance the previous condition of high southern and low northern pressures was re-established, and continued till the 15th.

March 16th–20th.—The high-pressure area took a more westerly position over the Bay of Biscay, and afterwards spread northwards up our western coasts, while the lower pressures moved to the eastward of the North Sea. The wind consequently veered North-westwards, and blew a gale over the North Sea, and on our North-west coasts, with snow squalls and very cold weather. In the course of the next few days the gradients and wind became still more Northerly, but the wind lulled in force, and by 6 p.m. on the 20th Northerly airs prevailed over Great Britain, and light South-westerly breezes over Ireland.

March 21st.—A somewhat singular change occurred. A shallow depression advancing from the westward over Ireland (*i.e.*, from the very direction in which the highest pressure had hitherto been lying), reached the South-east of Ireland by 8 a.m. 21st (see Chart Plate 5), whence it travelled in a south-easterly direction to the South-west of France. The fall of the barometer occasioned by this reverse of the condition hitherto prevailing in the West was large (0·4 in. to 0·5 in.), and as this was followed immediately by a considerable rise in the North, the distribution of pressure became completely altered, high northern pressures and moderate gradients for Easterly winds being formed over the United Kingdom.

SECTION II.

TABLE OF CYCLONIC SYSTEMS, JANUARY, 1876.

NATURE OF CHARACTERISTICS OBSERVED.	No. I. January 1-2.	No. II. January 2-3.	No. III. January 7-9.	No. IV. January 10-11.
Form	Elongated; major axis lying S.W. to N.E. at 8 a.m., 1st.	Apparently nearly circular	Nearly circular	Nearly circular
Size	Small	Large	Large	Small
Depth	Shallow	Moderate	Shallow	Shallow
Where first Observed	Off S. of Ireland on evening of December 31st.	Off the W. of Ireland	Over S. of France	Over N. Germany, near Magdeburg.
Direction of Motion	Easterly and then South-easterly.	N.N.E.	Irregular at first, then S.E.	W.S.W. and then S.W.
Rate of Motion	Moderate	Moderate at first, then slow	Slow	Slow
Regions passed over by Steepest Gradients.	Channel and N. of France	Ireland and Scotland	France, N. Germany, and Southern parts of England.	England (but gradients were never very steep).
Termination	Passed away to South-eastward; traced as far as Hungary.	Passed away to Northward	Passed away to South-eastward, over the Mediterranean.	Dispersed over N. of France
Time under Observation	About 40 hours	About 48 hours	72 hours	Rather more than 24 hours
Accompanying Winds	Strong S.W. to Westerly in France and the Channel; light North-easterly (temporarily) in N. of England.	Southerly and South-westerly; blowing a gale in the W.	North-easterly and Easterly; strong over the Netherlands, N. Sea, and on our E. coast; a gale in some places; moderate in the W.	Northerly to Easterly over England; South-westerly in N.E. of France; Easterly to Southerly in Belgium.
„ **Weather**	Mild in S.; colder in N.	Mild and rainy in Ireland and W. of Scotland; cold and dry over England. See "Remarks" below.	Cold and raw; snow and hail in Eastern district.	Very cold and dull; snow in the N.E. and S.E.
„ **Rainfall**	A good deal of rain on its South-eastern and Southern sides; very little in the N., but some snow.	Not heavy, and ceasing as the disturbance passed off.	Not heavy; confined chiefly to North-eastern, Eastern, and Southern districts; chiefly snow and hail.	Mainly snow; heaviest (0·1 inch to 0·25 inch) on N.E. and E. coasts; slight elsewhere.
REMARKS	The depression first appeared in the middle of a broad South-westerly current of wind, with pressure varying from about 30·3 inches over France to 29·3 inches over the N. of Scotland. Instead of continuing to move as a secondary to the Northern area of low pressure, however, it began to fill up during January 1, and broke away in a South-easterly direction.	This depression appeared while pressure was highest over the Peninsula and France, and rather high and rising over Northern Europe, but relatively low over the Atlantic (see 6 p.m. Chart, 1st, and 8 a.m. Chart, 2nd). A secondary depression was developed off our S.E. coasts during night of 2nd, causing a rise of temperature, and rain, over England also. This dispersed very quickly.	The appearance of a subsidiary disturbance over N. France threw the steeper gradients further N. than they would otherwise have been, and the Easterly gales were consequently felt more over our Eastern counties than in France.	This depression appeared with high Northern and low Southern pressure, and was apparently subsidiary to the low-pressure system existing over the Mediterranean. It is chiefly noteworthy on account of the direction in which it moved, and its effect in bringing snow and strong Easterly winds over our Eastern counties.

TABLE OF CYCLONIC SYSTEMS, FEBRUARY, 1876.

No. XIV. February 14-17.	No. XV. February 19-19.	No. XVI. February 20-23.	No. XVII. February 24-28.	No. XVIII. February 28-29.
Apparently nearly circular at first, then somewhat elliptical.	Somewhat oval, but irregular	Doubtful; its South-eastern side (the only side observed) being indented considerably by subsidiary disturbances.	Constantly varying	Apparently approaching to circular.
Large	Moderate to large	Large	Moderate	Large.
Moderate	Deep	Moderate	Moderate	Moderate.
Off the W. of Ireland	Over Ireland	Off the W. of Ireland	Off the W. of Ireland	Off the W. of Ireland.
North-easterly, and then Northerly.	North-easterly to Easterly	North-easterly	North-easterly to Easterly, varying.	N.N.E.
Very slow	Moderate	Slow	Variable	Moderate.
Ireland, England, and subsequently France.	Ireland, England, and France	British Islands, North Sea, and (subsequently) France.	England, France, and Bay of Biscay.	Western parts of British Isles.
Moved away and apparently filled up.	Passed away to Russia	Passed away North-eastward	Passed away Eastward	Passed away to North-north-eastward.
120 hours	About 72 hours	72 hours	96 hours	30 hours.
Strong South-easterly gales in N., and strong South-westerly to Westerly breezes in W. and S.	Strong South-westerly to Westerly winds and slight gales over Ireland, England, and N. of France; light North-easterly breezes in N. followed.	Strong South-westerly to Westerly winds over Ireland and England, followed by strong North-westerly winds, which subsequently extended to France (on 23rd). Very little wind in Scotland.	Southerly to Westerly winds to the Southward of its track, Southerly to Easterly in the N. Strong gales at some South-western stations on 26th.	Southerly to Westerly winds; strong on our S.W. coasts, moderate elsewhere.
Cold in N. at first, with much snow and rain; mild and rainy elsewhere; thunder and lightning in S.W.; afterwards less cold in N., as wind veered Southward.	Rainy, unsettled, and squally, but mild, with local wet fogs.	Mild, squally, and wet at first, then cold, with snow and hail. Aurora in N. on 20th and 21st.	Snow in N., rain elsewhere; then mild rain everywhere. Weather clearing as the series passed off.	Showery, with wet fog in places. Air very mild.
Heaviest in S.W., but a good deal fell generally.	Not very heavy, but prevailed very generally till the depression passed off.	Very general, but not heavy	General and continuous, but not very heavy.	Pretty general, but not heavy.
The movements of this depression and its ultimate disappearance were remarkable; and the giving way of the high pressure area in the N. as the depression advanced, and the consequent lulling of the S.E. gales, are also worthy of note. At time of its appearance a secondary disturbance lay over Holland, separating the high pressure areas over Northern and South-western Europe. The centre of the depression reached the W. of Scotland by 8 a.m. 15th. Here it remained nearly stationary for 48 hours, after which it began to move Northwards and to fill up briskly, and finally dispersed during the night of 17th.	The depression was at first shallow, but grew much deeper on following night, and travelling in a North-easterly direction, reached Norway on 19th; it finally passed away over Russia on 20th. Pressure at the time of its appearance was highest over the Southern parts of France the Bay of Biscay, and the Peninsula.	Two clearly marked subsidiary depressions accompanied this disturbance; one passed over the Northern parts of Ireland and England during the night of the 21st, the other travelled over the Southern parts of Scandinavia on the 23rd. Pressure remained highest over the Peninsula, the Southern parts of France, and the Mediterranean.	This depression moved very slowly and irregularly, underwent some remarkable modifications, was joined by other minor disturbances, and finally passed away to the Eastward of the North Sea on 28th. It was a very complex disturbance, developing into a series of interfering depressions, which, as they moved Eastward, formed into a trough of low pressure, and finally disappeared, travelling over Germany to the S. of Russia. Pressure was high both over Northern and South-western Europe during their prevalence.	Pressure remained high over Northern Europe as this disturbance moved up to the North-north-eastward.

TABLE OF CYCLONIC SYSTEMS, MARCH, 1876.

NATURE OF CHARACTERISTICS OBSERVED.	No. XIX. March 1-2.	No. XX. March 3-5.	No. XXI. March 6-7.
Form	Apparently nearly circular	Nearly circular	Somewhat oval
Size	Large	Large	Large
Depth	Moderate	Deep	Deep
Where first Observed	Off the N.W. of Ireland	To the Westward of the Hebrides	To the Westward of the Hebrides
Direction of Motion	North-east	Variable; Easterly to North-easterly	Easterly, then stationary, then moving North-eastwards.
Rate of Motion	Moderate	Slow	Very variable
Regions passed over by Steepest Gradients.	British Isles, especially the South-western and Western coasts.	British Isles and North Sea	British Isles, N. of France, and North Sea.
Termination	Travelled away	Travelled away, and apparently filled up.	Passed away Northward, and apparently dispersed.
Time under Observation	48 hours	48 hours	48 hours
Accompanying Winds	Strong South-easterly in N. of Scotland, and fresh South-westerly elsewhere; followed by rather strong Westerly breezes very generally.	Strong South-westerly winds and Westerly gales in all but the South-eastern parts of England, where the wind was moderate.	Strong Westerly winds and gales over British Isles, South-easterly winds over Scandinavia.
„ **Weather**	Dull and showery, with fog in places. Very mild.	Squally and showery, but with occasional bright intervals. Air mild. Lightning on the West coast.	Squally and showery; snow, sleet, and hail in N., rain elsewhere. Thunderstorms in N.W.; very unsettled, mild at first, then colder.
„ **Rainfall**	General, but not heavy	General, but slight	General, but not very heavy
REMARKS	A secondary disturbance was developed off our E. coast as the depression passed by the arm of low pressure which lay between the two high pressure areas (over Northern and Southern Europe). This secondary subsequently moved North-eastward. The Northern high pressure system began to give way on its Western side as the depression approached it.	Pressure remained high over the Peninsula; the Northern area of high pressure was moving steadily Southward; its centre being over Southern Russia at 8 a.m. 5th.	A secondary disturbance was developed to the South-eastward and Eastward of this depression, and finally extended so as to make a trough of low pressure across the Southern parts of Scandinavia. (See the figures on Chart Plate No. 4.) Pressure still highest over the Peninsula.

TABLE OF CYCLONIC SYSTEMS, MARCH, 1876.

No. XXII. **March 8-12.**	No. XXIIA. **March 12.**	No. XXIII. **March 13-17.**	No. XXIV. **March 28-31.**
Nearly circular at first, afterwards varying.	Oval	Nearly circular at first, then less regular in form.	Nearly circular at first, afterwards very irregular in form.
Very large	Large	Large, then very large	Moderate.
Deep, to very deep	Deep. Gradients very steep on Southern side.	Deep, but varying	Shallow.
To the Westward of the Hebrides	Off the S.W. of Ireland	To the Westward of the Hebrides	Off the S. of Ireland.
Irregular; chiefly Easterly to North-easterly, but sometimes stationary.	Easterly and East-north-easterly	Easterly (S.E. to N.E.), but varying	North-easterly, irregular.
Very variable, but slow	Very rapid	Very slow	Very slow.
British Isles, North Sea, and France	South of England, Channel, France, and Germany.	British Isles and North Sea	France, for S.W. winds; British Isles, for North-easterly winds.
Dispersed	Passed away to Eastward over Southern Russia.	Dispersed gradually	Dispersed.
120 hours	About 24 hours in our district	Several days	96 hours.
South-westerly to Westerly winds and gales at first, followed by Northerly gales in Scotland. (See Gale Table, p. 16).	Unusually severe Westerly (S.W. to N.W.) gales over our Southern districts, the Channel, France, and Germany (see Gale Table, p. 17). Northerly breezes in N.	Severe South-westerly to Westerly gales, afterwards North-westerly or Northerly gales and strong winds.	Light to moderate Southerly and South-westerly winds in France and S. of our Islands. North-easterly and Easterly breezes in the Northern.
Squally and showery, but mild; then colder, with snow, sleet, and hail, especially in N.	Much rain in France; snow, hail, and rain over our Islands, weather cold and raw with us; milder in France till the wind veered to the Northward of W.	Very mild on 14th, then much colder. Showery and squally. Rain only at first, but rain and snow generally after 14th.	Rain on its North-eastern, Eastern, and Southern sides at first, heavy in places afterwards, less general and slighter. Thunder and lightning in several places.
Very general; snow very heavy in Scotland, less so in England; thunder and lightning in W. and N.	General; and heavy in S.W. and S. only.	Fall very general and in some places heavy; slighter after centre had passed.	Fall not heavy as a rule, but more than an inch at Nairn on 30th.
The centre reached the E. of Scotland by 8 a.m. 9th where it remained for 48 hours, and grew very deep (minimum barometer below 28 inches), but then became shallower. On 11th it moved Eastward to the mouth of the Skager Rack, grew much shallower near its centre, and then moved North-eastward very slowly. On the 12th an unusually deep secondary disturbance travelled very rapidly over the S. of England in an Easterly direction, for particulars of which see No. XXIIA. Pressure in Western Europe was all the while highest in the South.	This depression travelled with unusual rapidity in an Easterly and East-north-easterly direction over our Southern counties, passed outside our area of observation on night of 12th, and reached Southern Russia, near Libau, at 8 a.m. 13th. Pressure continued high in Southern, low in Northern Europe.	This depression, becoming deeper and more extensive, reached the S.W. of Norway by the afternoon of the 15th, when it began to move North-eastward and to grow shallower. Its centre then lay over Lapland for several days, where it gradually dispersed. Several secondaries appeared; two of them (very small and shallow) crossed England on 15th, moving Eastward, while others travelled in a South-easterly direction over Scotland and the North Sea on the 16th and 17th. Distribution of pressure similar to that which prevailed when No. XXII. appeared, but it changed entirely in the rear of this depression, the conditions established being those of high readings in the W., low in the E.	This depression advanced very slowly in a North-easterly direction to our Central and North-western districts, then moved very little and irregularly, its form changing frequently as it gradually dispersed. Pressure remained high to the Eastward of the North Sea all the while the disturbance was over us.

TABLES OF GALES.

No. 1. (Cyclonic System No. XXII.)

Stations. March 8th to 11th, 1876.	Velocity 30-40 Miles per Hour.		Velocity Exceeding 40 Miles per Hour.				Velocity Fell below 30 Miles per Hour.		Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity.			Remarks.
	Commenced.	Direction of Wind.	Commenced.	Direction of Wind.	Mean Vel.	Duration in Hours.	Ended.	Direction of Wind.		Hour.	Direction of Wind.	Velocity.	
Sandwick.	2 p.m. (8th).	S.S.E.	8 p.m. (8th).	S. by E.	42	1	9 p.m. (8th).	S. by E.	7	8 p.m. (8th).	S. by E.	42	Wind rose to a little about 30 miles from N.N.W. at Noon and 1 p.m. 9th.
	7 p.m. (9th).	N.E. by N.	7 a.m. (10th).	N.N.E.	46	5	2 p.m. (10th).	N.E.	19	10 a.m. (10th).	N.	49	
Aberdeen.	5 p.m. (8th).	S.S.E.	—	—	—	—	7 p.m. (8th).	S.S.E.	2	6 p.m. (8th).	S.S.E.	33	—
	4 p.m. (9th).	S.W.byW.	—	—	—	—	7 p.m. (9th).	S.W.byW.	3	5 p.m. (9th).	S.W.byW.	38	
	2 a.m. (10th).	W.	8 a.m. (10th).	W. by N.	43	2	6 p.m. (10th).	NW.byW.	16	8 & 9 a.m. (10th).	W. by N.	43	
Glasgow -	10 p.m. (9th).	W. by S.	—	—	—	—	2 a.m. (10th).	W.	4	10 p.m. & Midt. (9th).	W.S.W.	33	—
Alnwick Castle.	1 a.m. (9th).	W. by S.	6 a.m. (9th).	W.S.W.	47	27	11 a.m. (10th).	W. by N.	34	4 & 5 a.m. (10th).	W.S.W.	52	Velocity slightly exceeded 30 miles from N.W. by W. at Midt. 10th and 1 a.m. 11th.
Stonyhurst.	3 p.m. (8th).	S. by E.	—	—	—	—	5 p.m. (8th).	S.W.	2	3 p.m. (8th).	S. by E.	35	Wind again increased to between 27 and 32 miles an hour, from W.N.W., from 1 p.m. 10th to 5 a.m. 11th.
Holyhead.	10 a.m. (8th).	S.byW.	11 a.m. (8th). 10 p.m. (8th).	S. W. by N.	46 41	4 12	Noon (9th).	W.S.W.	26	1 p.m. (8th).	S. by W.	49	—
	3 p.m. (10th).	W.N.W.	—	—	—	—	1 p.m. (11th).	W.N.W.	22	10 p.m. (10th).	W.N.W.	40	
Valencia.	3 a.m. (8th).	S.W.by W.	6 a.m. (8th). 8 p.m. (8th).	S. by W. W.	46 44	6 3	8 a.m. (9th).	W. by N.	29	10 a.m. (8th).	S.W. by S.	52	Wind also rose to a little above 30 miles on one or two occasions in the course of the 10th.
	11 a.m. (9th).	W.	—	—	—	—	5 p.m. (9th).	W.N.W.	6	Noon & 1 p.m. (9th).	W.	36	
	8 p.m. (9th).	W. by S.	—	—	—	—	Midnt. (9th).	W. by S.	4	8 p.m. (9th).	W. by S.	40	
Falmouth.	10 a.m. (8th).	S.W. by S.	Noon (8th).	S.S.W.	43	5	5 a.m. (9th).	W. by S.	19	3 p.m. (8th).	S.W.	48	—
	10 a.m. (9th).	W.S.W.	—	—	—	—	10 p.m. (9th).	W.	12	Noon (9th). 1 p.m. (9th).	S.W.byW. W.	40 40	
	2 a.m. (10th).	S.W.	—	—	—	—	7 a.m. (10th).	S.W.byS.	5	3 & 5 a.m. (10th).	S.W.	37	
	Noon (10th).	N.W.	—	—	—	—	1 a.m. (11th).	W.N.W.	13	5 p.m. & 11 p.m. (10th).	W.N.W.	36	
Kew -	2 p.m. (8th).	S.W.	—	—	—	—	7 p.m. (8th).	S.W. by S.	5	3 p.m. & 6 p.m. (8th).	S.S.W.	32	Velocity of 32 miles was reached at 1 p.m. 9th, for one hour only.

No. 2. (Cyclonic System No. XXIIa.)

Stations. March 12th, 1876.	Velocity 30-40 Miles per Hour.		Velocity Exceeding 40 Miles per Hour.				Velocity Fell below 30 Miles per Hour.		Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity.			Remarks
	Commenced.	Direction of Wind.	Commenced.	Direction of Wind.	Mean Vel.	Duration in Hours.	Ended.	Direction of Wind.		Hour.	Direction of Wind.	Velocity.	
Holyhead.	1 p.m. (12th).	N. by E.	—	—	—	—	4 p.m. (12th).	N. by E.	3	3 p.m. (12th).	N.N.W.	32	—
	7 p.m. (12th).	N.N.E.	—	—	—	—	1 a.m. (13th).	N.N.W.	6	8 p.m. (12th).	N.N.E.	34	
Falmouth	3 a.m. (12th).	S.W.byW.	4 a.m. (12th).	SW. byW.	48	6	? 1 p.m. (12th).	N.W.	?10	8 a.m. (12th).	W.S.W.	52	Anemometer out of action at 11 a.m. and Noon 12th, but gale probably still blowing.
Kew -	2 p.m. (12th).	N. by W.	—	—	—	—	4 p.m. (12th).	N.N.W.	2	2 p.m. (12th).	N. by W.	36	—
Yarmouth	9 a.m. (12th).	E. by N.	10 a.m. (12th).	E.	51	6	5 p.m. (12th).	?	8	2 p.m. (12th).	?	54	Direction trace wanting from Noon to 5 p.m. 12th.

This gale was, so far as our Islands are concerned, entirely confined to the southern districts, the winds at the northern observatories being moderate.

TABLE OF ANTICYCLONIC SYSTEMS—JANUARY TO MARCH, 1876.

NATURE OF CHARACTERISTICS OBSERVED.	No. I. January 1-4.	No. II. January 3-13.	No. III. January 10-14.	No. IV. January 14-16.
Form	Oval	Not accurately known	Not accurately known	Nearly circular
Size	Large; mean diameter about 500 miles.	Apparently large	Apparently large	Small
Height	Small. Max. readings 30·5 ins. (on 3rd).	Moderate. Max. readings 30·95 in. (on 12th).	Unknown; apparently small. Max. readings reported 30·6 ins.	Small. Max. readings 30·6 ins.
Where first Observed	Over Central France	N. of Scandinavia	Over and to the Westward of Ireland.	One over the N. of England and the other over the Sound. (See "Remarks," below.)
Direction of Motion	Southwards and South-westwards.	South-south-eastwards till 9th, then Northwards, and then South-eastward.	S.S.E.	Southwards
Rate of Motion	Slow	Slow	Slow	Very slow
Regions passed over	S.W. of France and Peninsula	Main body over Russia, but arm extending South-westward and Westward over Baltic, Scandinavia, and North Sea.	Ireland, and Atlantic to W. and S.W. of our Islands.	British Isles, North Sea, and Western part of N. Germany.
Termination	Disappeared over Atlantic	Disappeared over Central and Eastern Russia.	Disappeared	Disappeared on 16th
Time under Observation	4 days	10 days	5 days	2½ days
Accompanying Winds	Very light, Southerly to South-westerly on its Northern side, North-easterly in S.	Easterly winds over Central Europe, South-westerly and Westerly winds at times in far N., Easterly to South-easterly over North Sea.	South-westerly on our N.W. coasts, North-easterly over Bay of Biscay, and Northerly (for a time) over Ireland.	Very light and variable, South-westerly to Northward of the system, and North-easterly to Southward.
,, **Weather**	Fine, but foggy and cold. Paris on 1st, 20° colder than our S. coast.	Intensely cold weather over Russia, and Northern Europe, with snow in some places.	Very fine and dry, but cold	Cold and gloomy, but dry. England 10° colder than Scotland on 15th.
REMARKS	The highest readings were recorded when the centre of the anticyclone lay right over Spain.	The portion visible over our area was in the form of an arm or ridge which extended South-westwards and Westwards from Scandinavia over the North Sea, and at times (on the 5th and 6th) over the greater part of our Islands also.	This system was united, by a band of high pressure, to the large anticyclonic area which lay over Northern Europe from the 3rd to 13th (System No. II.), and within this band the small secondary anticyclone appeared on the 14th and 15th.	There were two distinct anticyclonic centres on 14th, which gradually merged into one, and finally developed into a long crest, which lay from W. to E. over the Southern half of the British Isles, but broke up during the afternoon of 16th, when a new high pressure area appeared in the S.W., somewhat similar to Nos. I. and III.

TABLE OF ANTICYCLONIC SYSTEMS—JANUARY TO MARCH, 1876.

No. V. **January 16-22.**	No. VI. **January 23-February 3.**	No. VII. **February 6-10.**	No. VIII. **February 12-15**	No. IX. **February 16-18.**
Apparently oval, but not accurately known.	Varying; elongated: major axis usually lying from W. to E.	Uncertain	Irregular, but apparently oval near its centre.	Irregular; at times uncertain from want of information.
Large	Large	Large	Large	Large.
Moderate. Max. readings, 30·6 ins., decreasing gradually to 30·3 ins.	Great. Max. readings, 30·7 ins. on Jan. 24th and Jan. 31st., decreasing to about 30·4 on Feb. 3rd.	Slight. Max. readings, 30·4 ins. on 6th, decreasing to 30·1 ins. on 10th.	Moderate to slight. Max. readings, 30·4 ins. on 13th.	Moderate. Max. readings, 30·5 ins. on 16th.
Bay of Biscay and Spain	East of France	North of Scandinavia	Over Scandinavia	Over Spain.
Irregular; it moved Eastwards to S. of France on 19th, but returned to Bay of Biscay on 22nd.	Changing considerably; first moving Eastwards and East-south-eastwards, to Austria, by 26th, and then travelling Northward to N. Germany, and breaking up entirely.	About East-south-easterly	Eastwards and South-eastwards.	Southwards.
Slow	Very slow	Slow	Very slow	Slow.
Peninsula and S. of France	France and Germany and South-western Russia.	Scandinavia	Northern districts of Europe	The Peninsula.
Uncertain	Dispersed	Dispersed, after undergoing several modifications, on 10th.	Disappeared over Eastern Russia.	Disappeared towards the N. of Africa.
6 days	12 days	5 days	About 3 days	About 3 days.
South-westerly over North-western Europe, and Easterly over the Peninsula and Mediterranean, except during 21st.	Very light variable winds near the centre, Southerly and South-westerly over North-western Europe.	Very light, chiefly Easterly to South-easterly over our area.	Easterly over the Baltic and Russia, South-easterly over Scandinavia.	South-westerly and Westerly breezes over Bay of Biscay and France, South-easterly in Portugal on 16th.
Fine and dry	Dry, foggy, and very cold	Dull and cold, but dry	Very cold, dull, and foggy	Fine.
It is doubtful whether the change of position noticed on 19th to 21st indicates any true motion in the system; probably it was merely the result of the advance of some small depression from the South-westward, which temporarily diverted the isobars from their course. (See Remarks to Cyclonic System No. VIII.)	This system was broken up by a cyclonic disturbance (No. XII.) which advanced over Northern Europe on the 3rd, and spread Southwards very rapidly on the following day.	After Feb. 8th this anticyclone formed only an arm of high pressure, stretching north-westwards from a much larger system which lay over the Eastern parts of Russia. A subsidiary anticyclone was developed over the British Isles and France on the 11th, but dispersed quickly after producing hard frost.	Simultaneously with this anticyclone another was observed over Turkey and Southern Russia, which appears to have dispersed on the 15th.	The small anticyclone shown over the Southern part of the Bay of Biscay on the 17th (Chart Plate 3), was apparently subsidiary to the larger anticyclone which was then over the Southern parts of the Peninsula.

TABLE OF ANTICYCLONIC SYSTEMS—JANUARY TO MARCH.

NATURE OF CHARACTERISTICS OBSERVED.	No. X. **February 23-25.**	No. XI. **March 22-24.**	No. XII. **March 24-31.**
Form	Uncertain; portion under observation somewhat elliptical.	Unknown; the greater part of the system being well over the Atlantic.	Very irregular; portion shown stretched South-westwards and Southwards from Northern Scandinavia and Lapland.
Size	Large	Apparently large	Large.
Height	Moderate. Max. readings 30·3 ins. on 23rd and 24th.	Unknown. Maximum readings recorded in our Islands decreasing from 30·2 ins. on 22nd to 29·7 ins. on 24th.	Unknown, but apparently moderate. Max. readings within our area varying from 29·8 in. on 27th to 30·1 on 30th and 31st.
Where first Observed	Over Spain	On our extreme N.W. coasts	Over Northern Scandinavia.
Direction of Motion	North-eastwards and then Southwards.	Southwards	Very irregular till 31st then Northerly.
Rate of Motion	Moderate	Slow	Very slow.
Regions passed over	The Peninsula	Our Western coasts and Bay of Biscay	Northern Europe.
Termination	Disappeared over Northern Africa	Apparently dispersed	Passed away to Northward.
Time under Observation	3 days	2½ days	8 days.
Accompanying Winds	Westerly (S.W. to N.W.) winds over France and the Bay of Biscay. Light Easterly over Southern half of Spain.	North-easterly to North-westerly, subsequently backing into S.W.	South-Easterly to Easterly.
„ **Weather**	Fine	Fine, clear, cold	Fine, with occasional fogs, cold; rain setting in as it passed away.
REMARKS	A subsidiary anticyclonic was thrown off by this system its centre being over the Bay of Biscay or W. of France on the evening of the 24th, and over Eastern Central France next morning, after which it dispersed. The weather within it was fine, but foggy locally, and not very cold.	A well-defined subsidiary anticyclone appeared over France on the 24th. (Max. readings 29·7 to 29·6), lying within a band of relatively high pressure which joined this system to No. XII., the centre of which lay over Northern Europe. This subsidiary dispersed during the succeeding night.	This system was, on the 28th and 29th, marked by the appearance of a depression over our Islands (see Table of Cyclonic System No. XXIV.) which however soon dispersed.

NOTES, to accompany the TABLE of ANTICYCLONIC SYSTEMS, JANUARY to MARCH 1876.

1. *From February 3rd to 5th.*—Pressure was highest over the Atlantic, to the westward and northwestward of our islands, and lowest over Germany and Austria, but no definitely formed anticyclone appeared in our neighbourhood until February 6th, when an arm or ridge of high pressure began to appear again over Scandinavia. (See Chart Plate 3, and Table of Anticyclonic Systems No. VII.)

2. *From February 11th to 12th.*—Pressure was highest (30·5+) over north-eastern Russia, lowest (about 29·75 ins.) over Ireland. A very slight subsidiary anticyclone lay over France, and a very shallow subsidiary depression over Denmark and Holstein, but no definite anticyclone of any importance appeared till the evening of the 12th.

3. *From February 18th to 22nd.*—After the disappearance of the anticyclonic system No. IX. pressure remained highest to the southward of the Mediterranean and lowest over, or to the northward of, our northern districts for several days, during which time westerly winds prevailed over Western Europe generally. On the 22nd there was some tendency to the formation of a large anticyclone over European Turkey, Italy, and Switzerland, but this seems to have disappeared before the next morning.

4. *From February 26th to March 16th.*—Pressure was continuously highest over the Peninsula or the southern shores of the Mediterranean and lowest to the northward of our islands. The gradients were steep, and several deep depressions passed from the Atlantic over Northern Europe, producing severe westerly gales over the British Isles and their neighbourhood. No well-formed anticyclones, however, appeared within our area during this interval. (See Chart Plates 4 and 5.)

From March 17th to 20th.—Pressure was highest over the Atlantic to the westward of the British Isles, lowest over the Baltic and Central or South-eastern Europe; the gradients, however, were slight, and the resulting northerly winds were of little strength.

On March 21st pressure was very irregularly distributed over our area, but on March 22nd the anticyclone No. XI. began to appear off our north-west coasts. (See Chart Plate 5.)

In all the above instances the higher pressures probably culminated in anticyclonic areas, but these were situated outside the area of our observation, and cannot therefore be described.

SECTION III.

REMARKS FOR JANUARY 1876.

(*Tables A. to C.,* JAN., *with Monthly Wind and Weather Charts.*)

Wind.—The wind at the commencement of the month was somewhat variable in direction, but generally South-westerly, and moderate to fresh in force. On the 4th an Easterly breeze began to appear over the south-eastern districts, and gradually extending north-westwards, had spread all over the country by the 7th, and occasionally blown strongly on our East coasts. On the 9th a South-westerly breeze began to appear in the North and to spread southward, but it was not until the 16th that it reached our most southern coasts, although it had in the meantime blown strongly over our northern districts. From the 16th to the 25th the wind was generally Westerly to South-westerly, strong in force, and frequently blowing a gale at our northern stations. A singular exception occurred over England and the South of Ireland on the 21st and part of the 22nd, when a small but well-formed depression (see remarks to No. VIII. in the Table of Depressions), which passed over the extreme South of England, drew the wind temporarily into East. After the 25th the wind became rather more Southerly and less strong, and at the close of the month Southerly and South-westerly breezes prevailed over the kingdom generally.

Pressure.—The mean pressure of the atmosphere, at the mean sea level, varied from about 30·3 inches over our south-eastern counties to 30·1 inches in the North of Ireland, and to 29·9 inches over the southern parts of the Shetlands. The gradients were favourable for the prevalence of South-westerly winds, and were steepest over the northern parts of the kingdom. The maximum readings were as high as nearly 30·7 inches, and occurred on the 14th or 15th over Ireland and England, but on the 7th in Scotland, when the very high pressure area then prevailing over northern Europe extended an arm westwards to our northern districts. The lowest readings (which, however, were higher than is usually found in January) occurred on the 20th or 21st, except at Valencia, and were recorded during the passage of the subsidiary to Depression No. VIII. At Valencia, however, the lowest reading occurred on the 2nd, as Depression No. II. passed by our extreme western districts. The range of pressure was small for the time of year, being less than 1·5 inches at all the observatories, and rather less than 1·1 inch at Valencia, Stornoway, and Kew.

Movements of the Depressions.—The majority of the depressions observed during this month moved in well-defined zones or bands, one of which lay in a W.S.W. to E.N.E. direction, to the northward of the British Isles, and extended over the north of Scandinavia, the other from West to East over our southern districts and North Germany. Two depressions, however, moved in entirely different directions, one (No. II.) passing in an almost due northerly direction outside our western coasts, while the other (No. IV.) came out from over North Germany, and passing in a west-south-westerly and south-westerly direction, dispersed over the North of France during the night of the 11th. The depressions following the more southern track were small when compared with those in the North, and that of the 21st appeared to be subsidiary to the larger disturbance which it accompanied. A third series of depressions (Nos. III. and VI.) were observed over the Mediterranean and South of France, but these were too far distant for their movements to be discussed very minutely. Their effect on our wind, however, was somewhat decided.

High-pressure areas were prevalent both over northern and south-western Europe, and good instances of bands of high pressure, with local anticyclones in them, occurred between the 13th and 15th.

Temperature.—The mean temperature (at the sea level) varied from a little above 44° on our extreme South-west coasts to rather below 41° over the inland parts of the North of Ireland, to about 40° in Aberdeenshire and Elgin, and to a little below 37° over the Fen districts and our eastern counties. These values, when compared with the means for the 13 years, 1857 to 1869, are rather high, except over the eastern parts of England where they show a deficit of some 2°. The lowest readings recorded were registered at somewhat irregular dates, viz., on the 8th or 9th at Falmouth, Stornoway, and Aberdeen (at which time a severe easterly wind prevailed all over the country), on the 12th at Kew, when anticyclonic conditions prevailed over the south-eastern districts, on the 14th at Armagh and Glasgow, when similar conditions prevailed in the North-west, and on the 22nd at Valencia, when anticyclonic conditions prevailed over the South of Ireland. Warm weather occurred both at the beginning and end of the month, so that while in many places the maxima were recorded between the 1st and 3rd, in others the highest temperature occurred on the 31st, the latter stations being mainly in the northern and north-eastern districts. The range of temperature was considerable, especially over the inland parts of England.

Vapour Tension.—This varied in almost exactly the same manner as the air temperature, the highest values (0·25 inch to 0·27 inch) being reported from our south-western coasts, the lowest (0·19 inch to 0·20 inch) from the Fen districts, and (0·20 inches to 0·21 inches) from the East of Scotland. Relative Humidity was greatest over the southern half of England and the North of Ireland, least over the North-east of Scotland.

Rainfall.—The rainfall was small generally for the time of year. The larger amounts reported were at our south-western stations, and at stations situate in hill districts, such as Dartmoor and Stonyhurst, while the smallest (less than an inch) were on the eastern coasts of Ireland and the North-east of England.

TABLE A., JAN.—SHOWING the MEAN and EXTREME PRESSURES and TEMPERATURES recorded at each of the SEVEN SELF-RECORDING OBSERVATORIES of the METEOROLOGICAL OFFICE during the Month of January 1876; together with the EXTREME RANGE of each, the MONTHLY VAPOUR TENSION, the RELATIVE HUMIDITY, and TOTAL RAINFALL.

NAMES OF OBSERVATORIES.	PRESSURE at 32° F. and the Mean Sea Level. (In English Inches.)						TEMPERATURE in the Shade. (In Degrees Fahrenheit.)						HYGROMETRIC VALUES.		RAINFALL. (In English Inches.)
	Mean for the Month.	Extremes.				Range.	Mean for the Month.	Extremes.				Range.	Tension of Vapour. (In English Inches.)	Relative Humidity (Saturation=100).	
		Minimum.		Maximum.				Minimum.		Maximum.					
		Reading.	Date.	Reading.	Date.			Reading.	Date.	Reading.	Date.				
Valencia - -	ins. 30·148	ins. 29·580	D. H. 2nd, 8 a.m.	ins. 30·655	D. H. 15th, 10 a.m.	ins. 1·075	° 45·7	° 31·0	D. H. 22nd, 1 a.m.	° 55·0	D. H. 3rd, 5 a.m.	° 24·0	in. 0·262	% 86	4·477
Armagh - -	·169	·555	20th, 1 a.m.	·672	14th, 10 a.m.	1·117	41·2	23·8	14th, 9 a.m.	53·0	3rd, 3 p.m.	29·2	·229	89	1·310
Glasgow - -	·138	·400	20th, 4 a.m.	·636	7th, 6 a.m.	1·236	40·6	22·2	14th, 7 a.m.	50·0	{ 4th, Noon. { 19th, 3 p.m.	27·8	·208	83	2·720
Aberdeen - -	·112	·228	20th, 5 a.m.	·700	7th, 8 a.m.	1·472	39·2	23·0	9th, 11 a.m.	50·8	31st, 3 p.m.	27·8	·201	84	1·175
Falmouth - -	·269	·524	21st, 6 a.m.	·665	15th, 10 a.m.	1·141	42·6	29·0	8th, 9 a.m.	53·2	2nd, 3 p.m.	24·2	·234	86	1·320
Stonyhurst - -	·240	·648	20th, 3 p.m.	·690	15th, 11 a.m.	1·042	38·5	19·3	9th, 0.13 a.m.	50·9	31st, 1 p.m.	31·6	·202	87	3·041
Kew - -	30·286	29·613	21st, { 3 p.m. & { 4 p.m.	30·682	15th, 10 a.m.	1·069	37·1	21·6	12th, 9 a.m.	53·7	3rd, 10 a.m.	32·1	0·195	88	0·819

TABLE B., JAN.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at STATIONS

(The Stations are grouped into Districts, and then arranged in order of Latitude

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit, and Mean Sea Level) from observations made at 9 a.m. and 9 p.m.	AIR TEMPERATURE.									
			At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Means of			Absolute Extremes.			
						Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.
		ins.	°	°	°	°	°	°	°		°	
0. SCOTLAND, N.	Sandwick Manse (Orkneys)	29·994	41·7	40·8	41·3	37·7	45·2	41·5	26·4	10th	52·5	31st
1. SCOTLAND, E.	Glenalmond	—	—	—	—	—	—	—	—	—	—	—
2. ENGLAND, N.E.	Seaham	30·203	39·1	38·6	38·9	34·1	43·9	39·0	24·3	9th	55·7	31st
	Durham	30·206	37·4	36·4	36·9	31·6	41·7	36·7	20·4	8th	55·0	31st
	Hull	30·260	36·4	36·8	36·6	33·0	41·4	37·2	20·0	9th	52·2	31st
	*Kelstern (Calcethorpe)	30·277	34.1	35·0	34·6	30·5	39·8	35·2	17·1	8th	54·1	31st
3. ENGLAND, E.	*Hillington	30·257	35·8	35·7	35·8	30·5	41·8	36·2	21·9	13th	56·0	3rd
	*Audley End	30·301	34·7	35·4	35·1	29·6	41·9	35·8	12·5	12th	55·2	28th
	Chigwell Row	30·317	36·5	37·0	36·8	30·4	42·1	36·3	20·3	12th	54·0	31st
4. MIDLAND COUNTIES.	*Buxton	30·275	34·0	35·4	34·7	29·5	40·9	35·2	16·5	9th	52·4	28th
	*Cheadle	30·265	34·0	35·4	34·7	30·5	40·4	35·5	18·8	12th	50·9	3rd
	Leicester	30·282	35·3	36·7	36·0	31·7	41·8	36·8	15·0	12th	53·8	31st
	*Churchstoke	30·277	36·4	37·9	37·2	—	45·3	?37·9	18·2	12th	55·7	26th
	Oscott	30·278	34·4	36·0	35·2	31·3	41·2	36·3	20·2	12th	53·6	31st
	Uppingham	30·278	34·2	35·2	34·7	30·2	41·5	35·9	18·9	12th	52·4	31st
	*Hereford	30·279	36·5	37·5	37·0	32·9	43·3	38·1	23·0	2nd	54·8	4th
5. ENGLAND, S.	*Marlborough	30·291	35·6	36·0	35·8	31·1	42·0	36·6	19·9	9th	53·3	3rd
	*Strathfield Turgiss	30·296	36·2	35·4	35·8	29·3	43·2	36·3	15·5	8th	56·5	31st
	Hastings	30·293	36·8	37·4	37·1	33·6	40·6	37·1	20·9	8th	51·3	3rd
	*Ramsgate	30·300	37·2	37·4	37·3	33·2	41·4	37·3	23·5	8th	53·2	3rd
	Folkestone	30·306	36·5	36·4	36·5	31·8	40·9	36·4	21·8	8th	51·6	3rd
6. SCOTLAND, W.	——	—	—	—	—	—	—	—	—	—	—	—
7. ENGLAND, N.W.	Hawes	30·254	35·8	36·2	36·0	30·9	41·7	36·3	16·3	9th	51·6	29th
	*Llandudno	30·225	41·3	41·8	41·6	35·8	47·4	41·6	22·2	9th	55·0	28th
8. ENGLAND, S.W.	*Caermarthen	30·243	40·0	39·5	39·8	34·6	45·9	40·3	21·0	9th	54·8	28th
	*Dartmoor	30·342	34·9	35·4	35·2	30·8	39·9	35·4	17·6	16th	49·6	28th
9. IRELAND, N.	Markree Castle	30·131	40·0	40·3	40·2	35·7	47·5	41·6	21·5	11th	54·2	3rd
10. IRELAND, S.	Dublin	30·206	42·2	43·4	42·8	38·9	47·2	43·1	26·0	9th	55·1	30th
	Parsonstown	30·185	39·5	40·6	40·1	35·6	46·2	40·9	19·6	15th	55·4	3rd
CHANNEL	Jersey (St. Aubin's)	30·309	40·9	40·7	40·8	36·6	43·8	43·2	25·0	8th	53·8	3rd

The Return from the Stations thus * marked have been of the **Second Order** in the **British Islands**, during the Mouth of January 1876.

beginning in each case with the Station lying furthest to the Northward.)

Tension of Vapour.			Relative Humidity.			Amount of Cloud (0 to 10).			Rainfall.			Weather, No. of Days of.							Wind, No. of Observations of.								
At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Total Fall in the Month.	Maximum Fall in 1 Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
ins.	ins.	ins.	%	%	%				ins.	ins.																	
·232	·221	·227	89	88	89	7·6	6·5	7·1	2·920	0·380	19th	22	2	1	0	4	16	6	1	0	0	6	20	13	15	4	3
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
·211	·215	·213	89	92	91	5·8	4·9	5·4	0·720	0·400	12th	11	5	3	0	10	11	1	0	6	3	0	22	17	4	6	4
·200	·202	·201	89	94	92	7·1	6·4	6·8	0·540	0·137	12th	14	6	1	0	2	15	1	3	3	3	3	24	14	3	2	7
·202	·206	·204	94	95	95	8·5	4·8	6·7	1·120	0·300	20th	14	4	0	0	3	14	1	1	10	4	3	4	29	8	3	0
·183	·195	·189	92	94	93	7·4	5·5	6·5	1·316	0·420	21st	17	8	0	0	3	13	2	4	8	3	5	6	26	4	5	1
·194	·194	·194	92	92	92	7·9	7·5	7·7	1·552	0·900	21st	8	7	0	0	4	21	2	1	14	4	10	9	9	6	2	7
·186	·195	·191	93	94	93	6·5	5·5	6·0	1·770	0·640	21st	10	5	0	0	3	10	0	3	12	1	7	3	13	0	4	19
·198	·208	·203	92	95	94	7·7	7·2	7·5	0·820	0·250	21st	7	6	0	0	2	14	0	8	14	9	6	11	5	5	3	1
·181	·186	·184	91	87	89	8·0	7·8	7·9	1·780	0·300	2nd	14	10	0	0	1	20	0	6	4	9	4	3	9	9	7	11
·183	·197	·190	93	95	94	8·5	7·5	8·0	1·690	0·720	20th	14	8	3	0	1	18	0	4	9	4	3	5	6	2	2	27
·189	·202	·196	91	93	93	9·4	7·3	8·4	1·890	0·760	21st	14	7	0	0	1	22	1	5	12	2	0	14	19	0	1	9
·200	·207	·204	89	87	88	7·6	5·7	6·7	1·312	0·750	20th	9	5	1	0	0	4	2	2	6	2	8	6	14	9	6	9
·188	·201	·195	92	91	92	8·8	7·9	8·4	1·780	0·700	21st	12	11	1	0	0	19	1	8	7	5	8	19	9	2	3	1
·190	·202	·196	96	98	97	8·4	6·8	7·6	2·280	0·946	21st	13	10	0	0	3	19	1	7	8	4	4	5	23	5	2	4
·205	·209	·207	92	90	91	8·3	6·8	7·6	1·780	0·990	20th	7	3	0	0	2	16	0	7	7	6	7	8	6	2	1	18
·206	·208	·207	99	98	99	8·4	7·4	7·9	2·510	1·510	21st	11	4	0	0	1	16	0	3	2	9	3	8	5	6	3	23
·199	·192	·196	90	89	90	8·3	7·9	8·1	0·894	0·253	21st	8	4	1	0	1	19	1	7	12	7	7	4	10	4	4	7
·201	·203	·202	88	87	88	7·9	7·3	7·6	1·205	0·350	21st	16	4	0	0	5	20	9	5	19	5	8	8	9	3	5	0
·204	·205	·205	89	89	89	7·8	7·2	7·5	1·013	0·278	21st	11	2	0	0	3	19	5	6	14	4	0	12	5	7	0	14
·197	·199	·198	92	93	93	7·7	7·4	7·6	1·200	0·360	22nd	10	5	0	0	1	17	2	10	8	8	7	10	5	3	2	9
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
·192	·193	·193	88	87	88	8·0	6·0	7·0	3·110	1·160	19th	21	9	0	0	3	14	0	2	4	4	2	1	19	8	1	21
·200	·201	·201	77	76	77	6·3	6·0	6·2	1·198	0·553	20th	6	0	0	0	6	13	3	1	2	13	4	11	19	12	0	0
·225	·227	·226	88	90	89	6·8	6·7	6·8	3·110	0·950	20th	12	0	0	0	4	13	0	8	9	7	5	7	9	3	0	14
·200	·203	·202	96	95	95	7·8	7·5	7·7	3·910	0·920	30th	14	3	0	0	2	17	4	7	8	7	6	15	6	2	3	8
·235	·236	·236	91	91	91	7·1	7·0	7·1	1·669	0·502	27th	20	1	0	0	3	15	1	0	2	2	13	26	4	1	1	13
·231	·238	·235	86	85	86	6·8	6·2	6·5	0·406	0·119	19th	9	3	1	0	2	6	2	2	1	6	4	11	14	13	5	6
·233	·243	·238	92	91	92	6·7	7·4	7·1	1·207	0·517	29th	22	1	0	0	3	16	0	1	1	1	15	15	10	4	2	13
·227	·222	·225	87	85	86	7·7	6·4	7·1	0·738	0·346	12th	15	4	1	0	5	17	1	1	13	12	4	12	7	6	1	6

furnished by the Meteorological Society (of London).

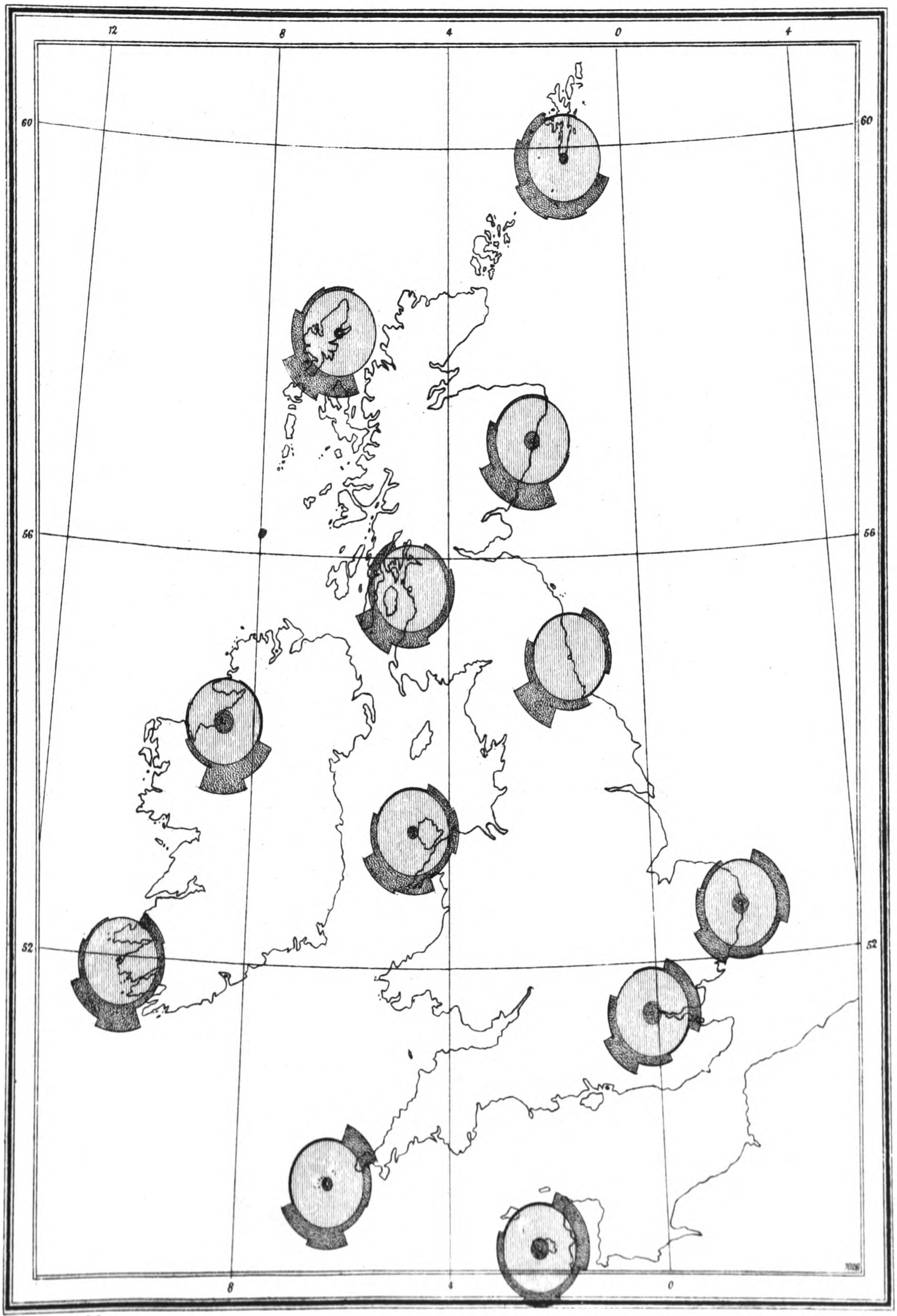
TABLE C., JAN.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC REPORTING STATIONS in the BRITISH ISLANDS, during the month of January, 1876. Observations made at 8 a.m. daily.

(The Stations are grouped in Districts, and then arranged in order of Latitude, beginning in each case with the Stations lying furthest North.)

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit, and Mean Sea Level) from Observations made at 8 a.m.	AIR TEMPERATURE.								TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUDS.	RAINFALL.			WEATHER, No. of Days of							WIND, No. of Observations of								
				Means of			Absolute Extremes.																									
			At 8 a.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.				Total Fall in the Month.	Maximum Fall in one Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
		ins.	°	°	°	°	°		°		ins.	%		ins.	ins.																	
0. SCOTLAND, N.	Sumburgh Head	29·915	42·5	36·6	44·8	40·7	27	21st	50	31st	·238	87	6·5	3·44	0·50	17th	28	0	0	1	4	8	3	1	0	0	5	6	9	5	4	1
	Stornoway	29·969	41·5	35·5	45·2	40·4	24	22nd	52	3rd	·232	90	8·2	5·62	1·09	23rd	28	2	2	0	2	21	13	1	0	0	0	8	14	5	2	1
	Thurso	29·985	38·8	34·0	45·1	39·6	18	10th	55	31st	·211	90	7·2	2·46	0·43	12th	24	1	0	0	3	14	3	2	0	0	2	14	5	1	1	6
	Wick	30·011	39·7	34·7	44·0	39·4	21	10th, 11th	52	31st	·214	88	6·8	1·45	0·27	12th	16	1	0	0	7	14	4	0	0	1	8	8	5	5	3	1
1. SCOTLAND, E.	Nairn	30·042	39·8	35·4	44·3	39·9	22	10th	55	31st	·196	80	4·5	0·72	0·35	19th	11	1	1	0	12	8	2	0	0	1	2	1	12	5	0	10
	Aberdeen	30·084	38·5	34·9	43·8	39·4	25	22nd, 23rd	51	19th, 31st	·197	85	5·2	1·08	0·26	3rd	11	3	1	0	10	9	2	1	0	0	1	12	10	4	1	2
	Leith	30·157	40·1	34·7	47·3	41·0	23	9th, 22nd	55	31st	·234	90	6·3	0·84	0·39	19th	9	1	0	0	9	14	3	2	2	1	3	1	11	10	0	1
2. ENGLAND, N.E.	Shields	30·214	38·9	34·8	44·9	39·9	25	9th, 10th	55	31st	·204	87	6·7	0·69	0·18	10th, 12th	11	5	3	0	3	10	5	1	3	2	1	4	15	4	1	0
	Scarborough	30·245	38·1	35·1	42·6	38·9	25	9th	52	31st	·215	93	8·0	0·79	0·15	12th	12	1	1	0	4	21	2	0	4	4	0	5	13	4	1	0
	York	30·253	36·4	32·0	42·2	37·1	22	9th, 10th	50	3rd, 18th, 19th, 24th, 31st.	·196	91	7·5	0·94	0·34	12th	11	5	0	0	5	20	0	4	3	1	2	16	3	2	0	0
3. ENGLAND, E.	Yarmouth	30·273	36·3	32·5	40·1	36·3	25	9th, 16th, 17th.	48	2nd, 3rd	·208	97	6·7	1·64	0·66	21st	11	1	1	0	8	14	6	0	5	6	2	4	7	3	2	2
	Cambridge	30·284	34·3	29·0	42·8	35·9	17	12th, 13th	58	31st	·186	94	8·2	1·98	0·91	21st	10	3	0	0	5	23	0	3	5	1	2	6	8	1	2	3
4. MIDLAND COUNTIES.	Nottingham	30·293	34·5	30·3	41·2	35·8	18	12th	54	31st	·190	95	8·3	1·64	0·57	21st	15	9	0	0	4	23	1	6	2	1	2	7	5	2	2	4
	Oxford	30·269	36·3	31·9	41·5	36·7	22	16th, 17th	53	3rd, 31st	·200	94	8·5	1·77	1·02	21st	10	0	0	0	3	23	0	4	3	2	1	4	3	2	0	12
5. ENGLAND, S.	London	30·284	36·2	30·8	44·0	37·4	19	9th, 12th, 13th.	58	31st	·203	93	8·4	0·99	0·37	21st	12	1	0	0	1	20	0	1	5	6	1	3	8	3	0	4
	Dover	30·276	37·1	33·6	41·2	37·4	24	9th	53	3rd	·197	89	6·2	0·58	0·23	21st	12	0	1	0	6	8	1	2	7	3	2	2	7	3	3	2
	Hurst Castle	30·256	38·5	33·4	42·6	38·0	23	9th, 12th	56	4th	·223	96	8·0	1·11	0·25	21st	16	2	0	0	4	22	0	1	7	7	1	3	5	3	1	3
6. SCOTLAND, W.	Ardrossan	30·161	41·7	38·2	46·3	42·3	22	10th	52	1st	·241	85	7·1	2·95	0·76	19th	24	1	0	0	6	16	4	0	2	3	3	6	11	2	4	0
7. ENGLAND, N.W.	Liverpool	30·225	38·3	34·3	43·7	39·0	22	9th, 10th	52	3rd, 30th, 31st.	·198	86	7·5	0·81	0·39	20th	9	1	0	0	6	19	1	3	5	1	12	3	5	2	0	0
	Holyhead	30·202	42·3	38·3	46·4	42·4	23	9th	52	2nd, 3rd	·240	89	7·2	1·30	0·36	20th	16	0	0	0	5	15	2	1	3	4	2	8	9	2	1	1
8. ENGLAND, S.W.	Pembroke	30·235	41·8	38·5	45·2	41·9	26	9th	51	2nd	·245	93	7·7	1·65	0·42	20th	13	0	0	0	3	16	4	2	6	2	4	8	6	1	1	1
	Portishead	30·257	37·5	31·8	44·3	38·1	21	9th	57	31st	·214	96	7·8	2·72	0·78	21st	12	2	0	0	2	16	4	3	6	3	1	4	6	3	1	4
	Plymouth	30·260	40·2	35·5	45·7	40·6	24	12th	54	3rd	·232	93	8·1	1·15	0·32	30th	11	0	0	0	4	22	1	2	8	4	4	5	3	1	0	4
9. IRELAND, N.	Greencastle	30·103	41·8	35·2	48·3	41·8	26	10th	53	3rd, 30th	·229	87	7·3	2·59	0·87	19th	20	0	0	0	7	18	1	3	1	4	4	7	5	4	2	1
	Donaghadee	30·159	40·9	37·1	44·8	41·0	24	9th	51	3rd	·236	93	6·2	1·14	0·29	29th	17	0	0	0	6	11	1	1	2	1	2	11	8	4	2	0
10. IRELAND, S.	Kingstown	30·185	44·3	40·5	47·8	44·2	31	9th, 10th	55	2nd, 3rd	·237	81	7·0	0·34	0·10	29th	12	0	0	0	2	8	0	1	1	3	4	11	2	7	1	1
	Roche's Point	30·197	43·7	40·5	47·3	43·9	29	22nd	52	1st, 2nd	·258	90	6·9	3·61	0·56	29th	18	1	0	0	6	13	3	6	4	0	1	6	8	4	2	0
	Valencia	30·167	44·9	38·6	49·5	44·1	28	11th	56	2nd	·248	84	6·8	5·05	1·52	27th	19	0	0	0	6	13	3	0	4	3	2	12	7	2	1	0
—	Scilly	30·234	45·4	42·0	48·6	45·3	30	8th	55	3rd	·269	89	8·3	1·07	0·39	20th	13	0	0	0	1	17	5	1	8	3	2	8	6	1	1	1

MONTHLY WIND CHART – JANUARY 1876.

Showing the Relative Prevalence of Wind for 8 points.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4
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4
60
60
56
56
52
52
8
4
0

To face p.28.

Dangerfield Lith. 22 Bedford S^t Covent Garden

MONTHLY WEATHER CHART - JANUARY 1876.

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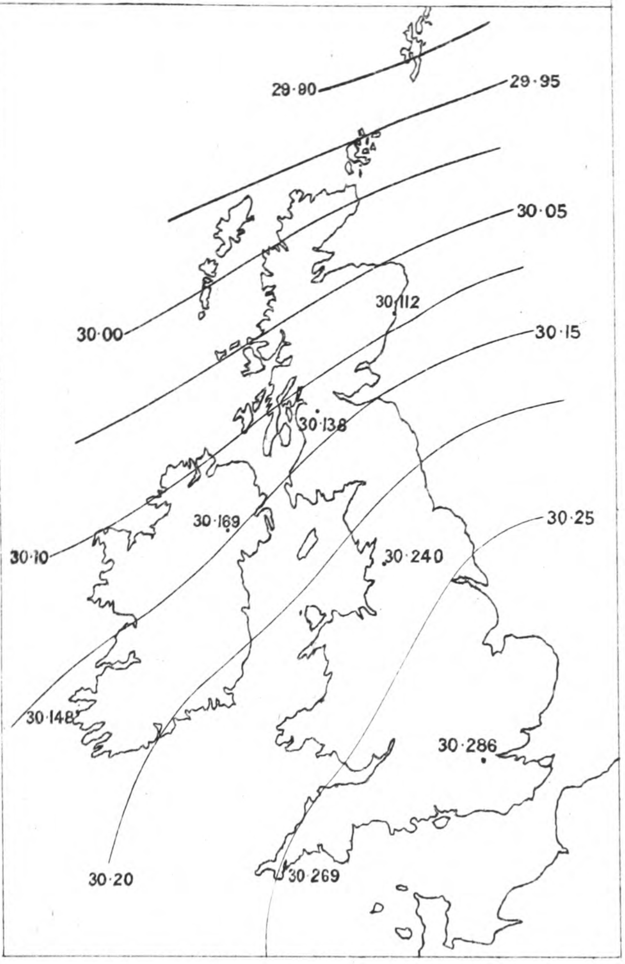
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29·95
30·05
30·00
30·112
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30·240
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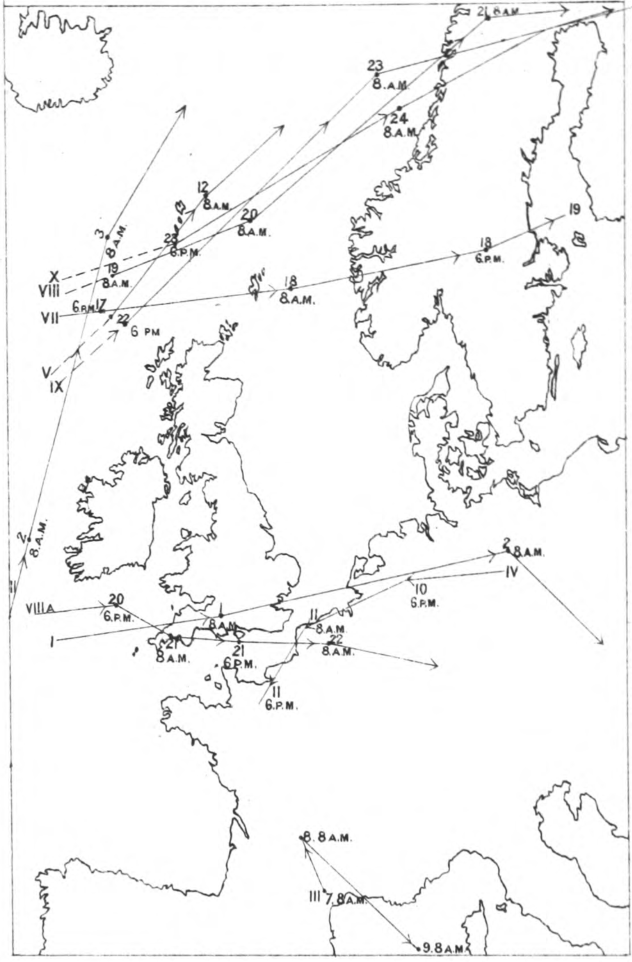
30·286
30·20
30·269

2. MOVEMENTS OF DEPRESSIONS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3 8.A.M.
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VIII
18 8.A.M.
18 6.P.M.
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VII
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22 6 P.M.
V
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2 8.A.M.
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I
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21 8.A.M.
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11 8.A.M.
22 8.A.M.
11 6.P.M.
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IV
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III 7. 8 A.M.
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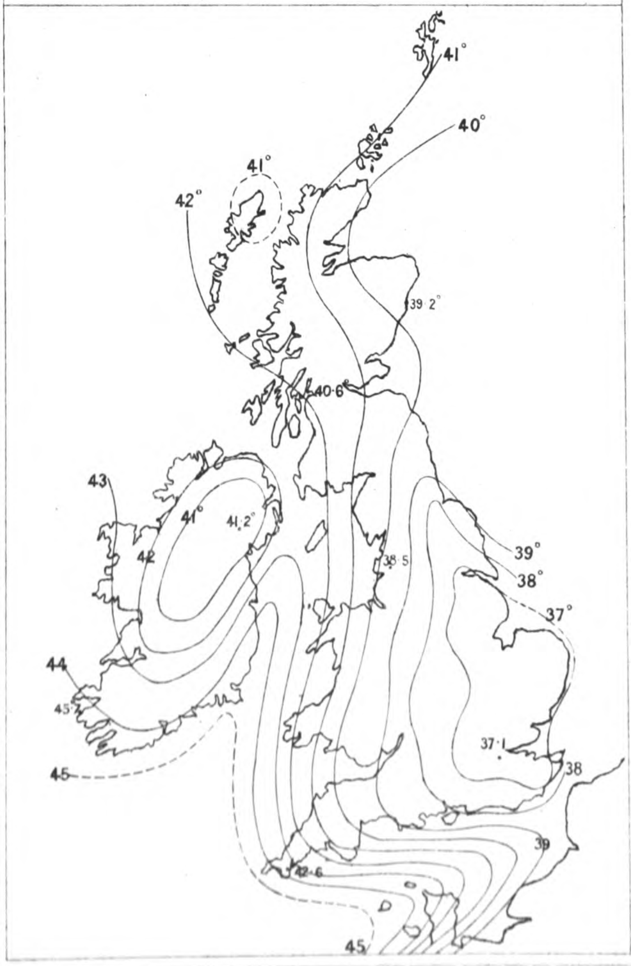
3. DISTRIBUTION OF MEAN TEMPERATURE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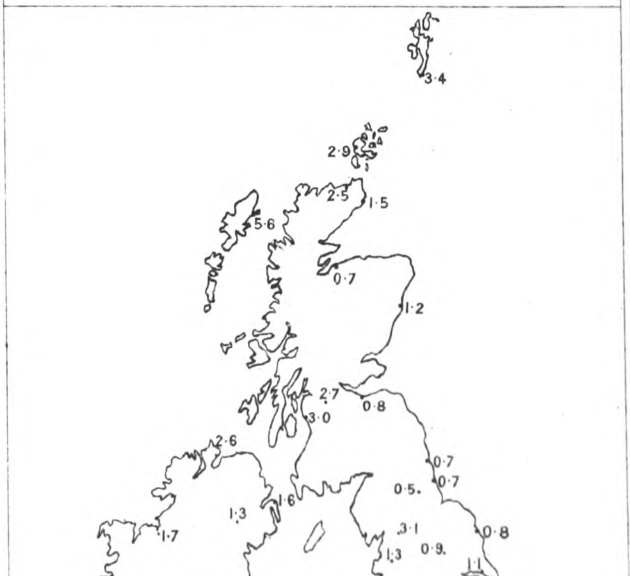
42
38·5
39°
38°
37°
44
45
45
37·1
38
39
42·6
45

4. RAINFALL


3·4
2·9
2·5
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2·0
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3·6
1·7
2·5
1·0
0·9
0·8
1·0
0·6
2·7
1·2
1·1
1·2
3·9
1·2
1·1
3·0
0·7

To follow Wind Chart for January.

DANGERFIELD LITH. 22 BEDFORD ST. COVENT GARDEN
1003

REMARKS FOR FEBRUARY 1876.

(*Tables A. to C.*, FEB., *with Monthly Wind and Weather Charts.*)

Wind.—The wind during this month varied a great deal. At the commencement it was South-westerly, but veered gradually round to West on the 3rd, to North-west and North on the 4th, and to North-east next day. North-easterly (N. to E.) winds remained with us for a few days, and blew a gale on our eastern coast on the 6th and 7th, after which a period of variable anticyclonic breezes intervened, giving way still later to winds from South-east and South-west. After February 15th South-westerly and Westerly winds were in the ascendant, and continued in force till the 22nd, when they veered to the North-westward. From the 25th to the 28th Easterly winds prevailed at our Northern stations, while Westerly were blowing elsewhere. Thus, over our more southern regions the South-westerly and Westerly winds preponderated largely, but in the far North it was not so, the South-easterly and Easterly winds being more general.

Pressure.—This was, on the whole, highest at our southern, lowest at our northern and north-western stations, the difference between the mean readings at Jersey and Stornoway being about a quarter of an inch. The maximum readings occurred on the 2nd over England, the 4th over Ireland, and the 6th over Scotland. The lowest readings observed during the month occurred in all parts of the kingdom on the 18th and 19th, during the passage of Depression No. XV., the centre of which passed completely over Scotland during the 18th. The range was not large anywhere, but was least over England and greatest over Scotland.

Movements of the Depressions.—They moved mainly in a north-easterly or east-north-easterly direction over our north-western and northern districts, but one (No. XIII.) appeared over Germany, whence after some irregular changes, it moved some distance in a northerly direction, and finally dispersed.

The high-pressure areas over northern and south-western Europe maintained their position with great persistency, but there were no subsidiary anticyclones worth mentioning.

Temperature.—The mean temperature for February, as shown by the Monthly Weather Chart No. 3, varied from 46° on our extreme south-western coasts to 40° in the North of Ireland, and East of England, and to 36° over the northern half of Scotland. A singularly local depression of temperature is reported at Folkestone during this month, the cause of which is not at all evident. The lowest readings observed were recorded during the anticyclonic conditions which prevailed between the 10th and 12th, except at Valencia, where a still lower value occurred on the 7th. The maxima occurred at very irregular dates, and, except at Kew (where the 29th was very warm), exhibited no unusual features for the time of year. The total range exceeded 40° at Strathfield Turgiss and in London, and amounted to 39° at Nottingham, and 36°·6 at Kew; but was much smaller at other places, amounting to only 18° at Scilly, 20° at Falmouth, and 21°·5 at Valencia.

Vapour Tension was greatest in the western and southern districts, least in the East and North, but Relative Humidity was highest in the North-east and East.

Rainfall.—The fall of rain during February varied from about 1·8 inches over and a little to the northward of London to between 2 and 3 inches over the major part of England, but in Ireland and Scotland the amounts were considerably greater. Large quantities of rain fell on the 14th, 17th and 20th, but it was only at the hill stations, such as Hawes and Dartmoor, that more than an inch fell in the course of any one day.

TABLE A., Feb.—Showing the Mean and Extreme Pressures and Temperatures recorded at each of the Seven Self-recording Observatories of the Meteorological Office during the Month of February, 1876, together with the Monthly Vapour Tension, the Relative Humidity, and Total Rainfall.

Names of Observatories.	Pressure at 32° F. and the Mean Sea Level. (In English Inches.)						Temperature In the Shade. (In Degrees Fahrenheit.)						Hygrometric Values.		Rainfall. (In English Inches.)
	Mean for the Month.	Extremes.				Range.	Mean for the Month.	Extremes.				Range.	Tension of Vapour. (In English Inches.)	Relative Humidity (Saturation = 100).	
		Minimum.		Maximum.				Minimum.		Maximum.					
		Reading.	Date.	Reading.	Date.			Reading.	Date.	Reading.	Date.				
	ins.	ins.	D. H.	ins.	D. H.	ins.	°	°	D. H.	°	D. H.	°	in.	%	ins.
Valenoia - -	29·718	29·005	18th, 6 a.m.	30·330	4th, Noon	1·325	46·5	32·4	7th, 2 a.m.	53·9	17th, 1 p.m.	21·5	·261	84	5·786
Armagh - -	·697	28·901	18th, Noon	·243	4th, 7 p.m.	1·342	40·0	24·1	12th, 6 a.m.	51·9	22nd, 2 p.m. 28th, 1 p.m.	27·8	·218	89	3·820
Glasgow - -	·662	·777	18th, 4 p.m.	·216	6th, 10 p.m.	1·439	37·4	23·0	11th, 9 a.m.	49·5	1st, 5 a.m.	26·5	·183	82	4·760
Aberdeen - -	·658	28·793	18th, 6 p.m.	·239	6th, 11 p.m. Midt.	1·446	36·9	25·6	10th, 7 a.m.	50·0	22nd, 2 p.m.	24·4	·187	86	4·650
Falmouth - -	·856	29·190	18th, 8 p.m.	·421	2nd, 11 p.m.	1·231	45·5	34·0	10th, 5 a.m.	54·0	27th, 1 p.m. 29th, 1 p.m.	20·0	·262	86	5·155
Stonyhurst - -	·729	28·979	19th, 2 a.m.	·156	2nd, 10 p.m.	1·177	39·7	21·9	15th, 6 & 8 a.m.	51·7	18th, 11 a.m. 21st, 5 p.m.	29·8	·208	85	5·863
Kew - -	29·821	29·171	19th, 1 a.m.	30·384	2nd, Midt.	1·213	41·5	*21·5	12th, 8 a.m.	58·1	29th, 4 p.m.	36·6	·219	84	2·013

* Photographic trace rather faint.

TABLE B., FEB.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at
The values are not

(The Stations are grouped in Districts, and then arranged in order of Latitude,

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit, and Mean Sea Level) from Observations made at 9 a.m. and 9 p.m.	AIR TEMPERATURE.									
						Means of			Absolute Extremes.			
			At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.
		ins.	°	°	°	°	°	°	°		°	
0. SCOTLAND, N.	Sandwick Manse (Orkneys)	29·643	35·4	35·2	35·3	32·7	39·7	36·2	23·2	21st	49·9	1st
1. SCOTLAND, E.	Glenalmond	29·685	34·6	33·7	34·2	29·9	38·2	34·1	22·9	14th	47·3	22nd
2. ENGLAND, N.E.	Seaham	29·683	40·2	38·9	39·6	35·0	45·2	40·1	25·8	13th	55·2	29th
	Durham	29·682	39·0	36·8	37·9	32·8	43·5	38·2	21·5	10th	52·9	29th
	Hull	29·732	39·0	39·1	39·1	35·4	44·6	40·0	25·0	10th	56·5	29th
	Kelstern (Calcethorpe)	29·746	36·9	37·2	37·1	33·3	43·8	38·6	19·9	12th	55·2	18th, 29th
3. ENGLAND, E.	Hillington	29·750	38·9	38·7	38·8	34·5	45·4	40·0	20·1	12th	58·0	29th
	Audley End	29·808	39·9	39·9	39·9	35·2	46·2	40·7	23·0	12th	57·7	29th
	Chigwell Row	29·850	40·2	40·5	40·4	35·6	45·4	40·5	21·8	12th	56·0	29th
4. MIDLAND COUNTIES.	Buxton	29·763	37·0	36·5	36·8	32·0	42·8	37·4	10·0	11th	51·9	29th
	Cheadle	29·765	37·5	37·2	37·4	33·0	43·7	38·4	20·1	11th	54·8	29th
	Leicester	29·770	39·2	39·9	39·6	35·9	45·9	40·9	20·3	12th	58·7	29th
	Churchstoke	29·793	39·8	39·1	39·5	—	46·2	?	15·7	11th	55·5	17th
	Oscott	29·776	38·1	38·7	38·4	34·3	45·9	40·1	18·8	11th	59·1	28th
	Uppingham	29·768	38·0	38·1	38·1	34·1	44·5	39·3	21·0	11th	55·2	29th
	Hereford	29·784	40·4	40·6	40·5	36·2	46·6	41·3	19·8	12th	57·3	28th
5. ENGLAND, S.	Marlborough	29·828	39·5	39·6	39·6	36·3	46·0	41·2	20·3	12th	56·0	29th
	Strathfield Turgiss	29·829	40·1	39·5	39·8	35·1	46·9	41·0	17·7	12th	58·3	29th
	Ramsgate	29·830	40·8	41·0	40·9	36·7	45·4	41·1	24·1	11th	58·0	28th
	Folkestone	29·831	39·6	39·2	39·4	35·9	42·9	39·4	26·0	12th	51·8	28th
	Hastings	29·850	40·2	40·1	40·2	36·9	43·8	40·4	25·6	11th	50·6	28th
6. SCOTLAND, W.	——	—	—	—	—	—	—	—	—	—	—	—
7. ENGLAND, N.W.	Hawes	29·728	36·8	36·5	36·7	32·4	41·5	37·0	16·6	10th	49·0	21st
	Llandudno	29·746	42·5	41·4	41·9	38·1	48·0	43·1	25·0	11th	57·0	28th
8. ENGLAND, S.W.	Caermarthen	29·773	42·2	41·3	41·8	37·7	47·6	42·7	20·9	12th	55·1	27th
	Dartmoor	29·926	38·8	38·6	38·7	35·0	41·8	38·4	20·5	12th	49·4	26th
9. IRELAND, N.	Markree Castle	29·667	39·5	38·6	39·1	34·3	46·5	40·4	20·7	7th	55·8	28th
10. IRELAND, S	Dublin	29·725	41·8	41·6	41·7	38·0	47·1	42·6	26·9	12th	57·1	17th
	Parsonstown	29·718	40·7	39·9	40·3	35·6	47·3	41·5	21·9	6th	55·0	17th
CHANNEL	Jersey (St. Aubins)	29·935	44·1	43·9	44·0	40·7	47·4	44·1	31·0	12th	54·9	18th

STATIONS of the SECOND ORDER in the BRITISH ISLANDS, during the Month of February, 1876.
corrected for Diurnal Range.
beginning in each case with the Station lying furthest to the Northward.)

TENSION OF VAPOUR.			RELATIVE HUMIDITY.			AMOUNT OF CLOUD (0 to 10).			RAINFALL.			WEATHER. No. of Days of							WIND. No. of Observations of								
At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Total Fall in the Month.	Maximum Fall in 1 Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
ins.	ins.	ins.	%	%	%				ins.	ins.																	
·190	·188	·189	92	91	92	5·7	7·0	6·4	3·580	·380	18th	22	8	0	0	2	9	4	8	3	7	12	3	5	3	4	13
·173	·168	·171	85	86	85	7·2	6·8	7·0	5·060	·720	14th	20	12	1	0	2	12	0	2	2	6	6	5	8	6	4	13
·222	·219	·221	90	93	92	6·0	5·1	5·6	2·140	·270	25th	24	11	5	0	3	7	0	0	9	4	3	7	15	11	7	
·213	·199	·206	89	91	90	6·8	5·0	5·9	2·442	·316	3rd	26	10	3	0	3	7	0	4	7	3	2	7	11	12	7	5
·218	·215	·217	92	90	91	6·8	5·8	6·3	2·490	·280	14th	26	8	1	0	4	11	0	1	9	1	7	0	16	13	8	3
·207	·208	·208	92	91	92	6·5	5·7	6·1	2·782	·422	14th	25	9	4	0	5	11	0	5	6	2	3	6	21	11	3	1
·219	·218	·219	92	92	92	7·6	7·2	7·4	2·657	·390	14th	20	10	0	2	1	13	2	0	8	2	6	2	27	5	7	1
·221	·226	·223	90	92	91	7·8	6·4	7·1	2·270	·250	5th	21	7	2	0	1	14	0	3	4	0	7	0	24	1	13	6
·220	·226	·223	89	90	90	8·2	7·6	7·9	1·800	·260	29th	15	4	0	0	1	16	0	9	7	2	2	13	14	6	4	1
·199	·196	·198	87	87	87	8·2	7·4	7·8	6·190	·670	14th	23	11	10	0	0	15	1	1	8	2	4	1	3	20	12	7
·207	·209	·208	92	94	93	6·6	6·4	6·5	3·460	·530	20th	23	12	1	2	1	12	2	9	4	3	2	5	17	6	4	8
·212	·218	·215	88	89	89	7·7	5·2	6·5	2·670	·340	14th, 15th, 20th.	23	7	0	0	5	13	1	4	5	5	2	4	24	7	0	7
·224	·220	·222	87	89	88	7·2	6·1	6·7	2·814	·607	14th	20	7	2	0	0	7	5	0	0	0	0	3	21	14	15	5
·219	·222	·221	91	92	92	8·0	7·1	7·6	2·510	·340	13th	23	9	0	1	3	18	3	7	4	3	1	11	19	5	4	4
·219	·217	·218	96	95	96	7·3	5·4	6·4	2·224	·384	20th	21	8	0	0	3	11	3	8	5	0	2	4	19	12	4	4
·223	·222	·223	85	86	86	7·4	6·3	6·9	2·360	·310	20th	21	7	0	0	3	14	0	3	4	2	1	3	11	11	6	17
·228	·228	·228	94	94	94	8·2	7·0	7·6	3·105	·520	14th	20	7	1	0	1	14	0	6	3	3	1	4	13	13	4	11
·233	·236	·235	89	94	92	7·3	6·6	7·0	2·107	·366	20th	16	4	2	0	4	12	0	5	4	3	5	1	14	10	9	7
·230	·230	·230	88	87	87	7·7	6·8	7·3	2·105	·345	15th	16	5	1	0	1	15	7	4	8	2	0	17	14	9	1	3
·229	·228	·229	94	95	95	7·4	6·8	7·1	2·810	·410	20th	19	7	2	0	1	12	0	10	2	2	1	10	9	7	3	4
·231	·232	·232	89	90	90	8·0	7·9	8·0	3·110	·610	20th	23	6	0	0	2	19	9	11	3	3	1	12	19	7	2	0
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
·197	·195	·196	87	88	87	8·4	7·9	8·2	8·190	1·840	21st	25	14	3	0	0	18	0	3	7	5	1	0	23	7	2	10
·228	·218	·223	84	84	84	6·6	5·4	6·0	3·011	·560	17th	21	4	1	1	6	10	1	4	0	7	5	8	17	17	0	0
·245	·241	·243	88	90	89	7·4	7·1	7·3	5·690	·980	14th	21	1	0	0	3	16	0	2	7	4	2	2	17	9	4	11
·237	·232	·235	97	97	97	8·9	8·0	8·5	11·820	1·640	16th	23	4	0	0	2	21	7	3	4	3	1	5	11	16	7	8
·222	·213	·218	89	89	89	7·1	6·7	6·9	5·224	·890	22nd	25	5	2	2	3	12	0	0	1	3	15	15	9	3	4	8
·228	·228	·228	86	87	87	5·9	5·7	5·8	3·012	·489	13th	23	5	4	0	5	9	0	3	2	4	8	4	13	14	5	5
·236	·230	·233	91	91	91	6·8	6·8	6·8	4·162	1·004	9th	24	2	0	0	2	9	0	1	1	3	14	6	12	11	6	4
·257	·259	·258	87	88	88	8·5	6·7	7·6	3·070	·700	19th	26	3	4	0	1	14	5	5	5	3	4	4	20	9	5	3

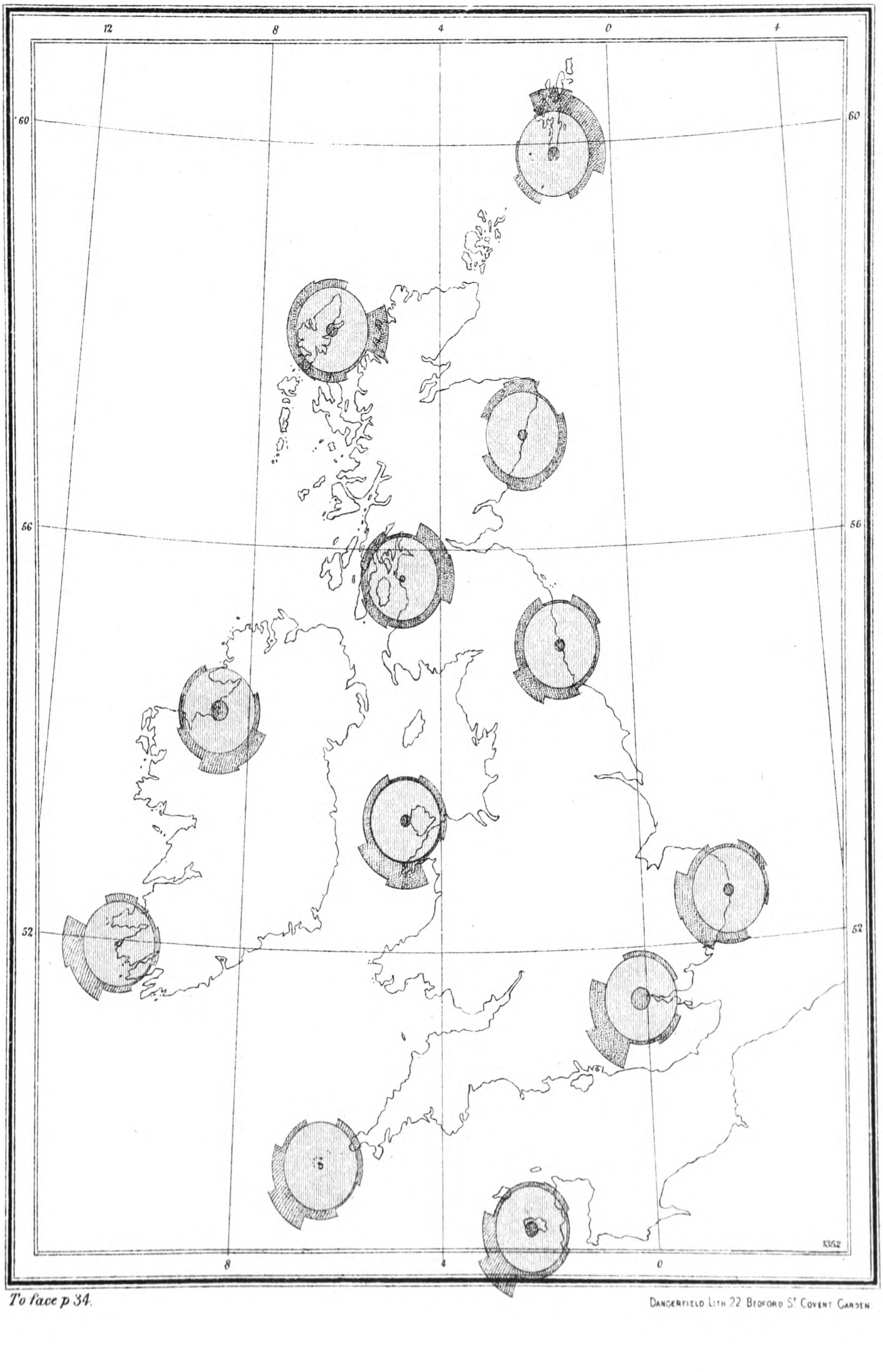
TABLE C., FEB.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC REPORTING STATIONS in the BRITISH ISLANDS, during the month of February, 1876. Observations are made at 8 a.m. daily.

(The Stations are grouped in Districts, and then arranged in order of Latitude, beginning in each case with the Station lying furthest North.)

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit, and Mean Sea Level) from Observations made at 8 a.m.	AIR TEMPERATURE.								TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.			WEATHER. No. of Days of							WIND. No. of Observations of								
				Means of			Absolute Extremes.																									
			At 8 a.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.				Total Fall in the Month.	Maximum Fall in one Day.	Date.	Rain.	Snow.	Hail.	Thunderstorm.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
		ins.	°	°	°	°	°		°		ins.	%		ins.	ins.																	
0. SCOTLAND, N.	Sumburgh Head	29·620	36·6	31·7	40·6	36·2	22	20th, 21st	48	1st	·178	82	6·8	1·89	0·55	29th	20	2	0	0	1	6	2	9	6	6	2	1		1	0	1
	Stornoway	29·612	35·4	31·3	40·0	35·7	20	20th	48	1st, 22nd	·177	85	5·1	5·33	0·63	26th	20	3	1	1	10	8	4	3	0	9	1	3	4	4	3	2
	Thurso	29·627	35·2	31·1	41·8	36·5	22	21st	52	1st, 17th	·184	89	7·6	4·95	0·60	14th	27	8	0	0	1	15	2	3	3	4	4	6	2	1	1	5
	Wick	29·627	36·0	30·5	40·7	35·6	12	25th	49	1st, 22nd	·188	88	7·8	3·31	0·42	14th, 19th	23	3	0	0	3	16	5	1	0	4	8	2	3	5	6	0
1. SCOTLAND, E.	Nairn	29·648	34·1	31·1	39·3	35·2	22	14th	52	1st	·169	85	5·9	2·66	0·50	26th	20	3	0	0	11	14	1	2	0	2	3	1	5	0	3	13
	Aberdeen	29·629	36·8	34·0	41·2	37·6	27	10th	51	22nd	·191	88	6·7	4·26	0·67	26th	25	14	0	0	7	14	4	5	1	4	4	5	4	0	4	2
	Leith	29·661	37·0	33·2	45·6	39·4	24	13th, 14th, 15th.	54	1st, 18th, 22nd	·202	92	6·7	3·13	0·41	2nd	23	6	5	0	4	14	1	1	1	3	5	3	6	6	3	1
2. ENGLAND, N.E.	Shields	29·685	39·1	35·4	44·8	40·1	27	10th, 11th, 13th.	55	29th	·206	86	6·6	2·27	0·38	28th	23	11	4	0	5	9	5	1	4	2	2	4	6	5	4	1
	Scarborough	29·703	39·8	36·5	44·8	40·7	28	10th, 13th	54	18th, 21st, 22nd.	·219	90	6·5	2·55	0·24	4th	24	3	3	0	8	12	0	2	2	3	0	5	6	8	2	1
	York	29·718	38·5	34·4	46·3	40·4	24	10th	57	18th, 21st	·215	93	6·7	2·31	0·33	14th	23	9	0	0	6	14	2	7	2	1	1	4	4	8	2	0
3. ENGLAND, E.	Yarmouth	29·768	38·4	35·2	44·1	39·7	26	12th	56	29th	·225	97	6·5	2·24	0·30	14th	21	5	5	1	8	11	2	1	3	2	0	4	7	8	3	1
	Cambridge	29·790	38·4	34·9	48·0	41·5	24	12th 13th,	60	29th	·214	93	8·0	2·17	0·30	14th	21	4	1	0	3	18	0	4	1	0	1	3	12	2	2	4
4. MIDLAND COUNTIES.	Nottingham	29·770	37·5	33·8	46·6	40·2	18	11th, 12th,	57	21st, 28th	·209	93	6·7	2·49	0·36	20th	23	10	1	1	8	15	1	5	1	1	2	6	10	1	2	1
	Oxford	29·797	40·0	37·0	46·3	41·7	20	11th	57	29th	·209	85	7·5	2·80	0·39	20th	19	1	0	0	5	17	0	2	1	0	2	2	10	4	2	6
5. ENGLAND, S.	London	29·816	40·0	36·7	48·2	42·5	21	11th	62	18th	·231	90	7·1	1·81	0·41	20th	22	1	0	0	5	16	0	2	2	0	2	1	12	6	0	4
	Dover	29·822	39·4	36·7	43·7	40·2	26	11th	53	25th	·220	91	7·4	2·81	0·46	14th	21	4	0	0	2	14	0	4	4	0	1	2	11	7	0	0
	Hurst Castle	29·820	41·4	37·8	44·8	41·3	30	9th, 10th	53	18th	·244	94	7·0	2·87	0·55	20th	20	0	1	0	4	15	2	3	3	1	2	2	7	7	3	1
6. SCOTLAND, W.	Ardrossan	29·670	37·6	34·7	44·1	39·4	24	11th, 12th	51	29th	·191	84	6·1	5·39	0·82	25th	18	3	2	1	8	10	4	1	6	8	2	2	4	2	4	0
7. ENGLAND, N.W.	Liverpool	29·720	39·7	36·3	46·0	41·2	22	11th	56	21st	·206	84	7·5	2·29	0·44	20th	17	2	0	0	5	18	4	2	2	2	6	3	9	4	1	0
	Holyhead	29·749	41·6	39·1	46·4	42·8	30	11th, 12th	53	28th	·229	88	7·4	3·29	0·40	17th	22	2	3	0	3	12	2	1	2	2	1	9	7	3	3	1
8. ENGLAND, S.W.	Pembroke	29·768	43·3	41·1	46·0	43·6	32	11th	50	17th, 18th, 20th, 21st, 26th.	·244	87	6·9	3·71	0·54	14th	23	0	0	0	5	14	9	1	3	3	2	3	9	5	3	0
	Portishead	29·795	41·4	36·4	47·6	42·0	22	12th	55	22nd	·235	91	7·6	4·61	0·73	17th	19	0	0	0	3	16	8	2	4	0	1	4	9	5	2	2
	Plymouth	29·844	42·6	39·0	48·4	43·7	30	5th	56	27th	·258	94	7·1	4·23	0·56	16th	21	0	0	0	8	20	3	4	4	3	2	3	7	2	2	2
9. IRELAND, N.	Greencastle	29·627	39·1	33·5	46·0	39·8	24	12th, 13th	53	26th	·204	85	7·5	4·95	0·64	27th	22	0	1	0	6	19	0	2	2	5	3	3	3	7	4	0
	Donaghadee	29·663	39·9	36·9	44·9	40·9	27	12th	52	28th	·221	91	5·6	3·27	0·51	17th	18	0	0	0	8	8	3	0	2	5	3	6	4	6	3	0
10. IRELAND, S.	Kingstown	29·704	43·0	40·1	47·5	43·8	34	12th, 13th	57	17th	·228	82	6·8	3·13	0·62	12th	22	1	0	0	2	8	5	0	1	1	4	7	1	11	4	0
	Roche's Point	29·746	44·4	41·2	48·8	45·0	32	6th	54	28th	·260	89	6·3	6·71	0·78	20th	25	1	1	1	5	9	3	3	1	0	4	2	6	11	2	0
	Valencia	29·721	45·4	40·4	50·4	45·4	30	8th	56	28th	·262	87	7·2	6·02	0·64	13th	26	0	0	0	4	13	5	3	1	2	1	2	8	11	1	0
—	Scilly	29·838	47·7	44·6	50·3	47·5	37	6th, 9th	55	18th, 22nd, 28th, 29th.	·287	87	9·0	2·76	0·38	16th	24	0	0	0	0	19	6	0	3	2	1	3	11	6	3	0

MONTHLY WIND CHART – FEBRUARY 1876.

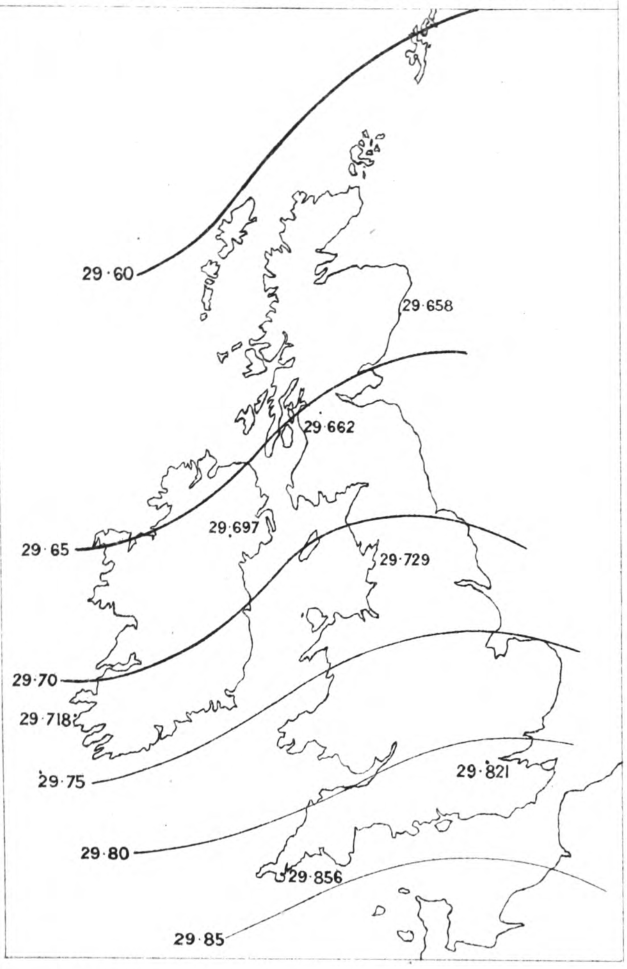
Showing the Relative Prevalence of Wind from 8 points.


12
8
4
0
4
60
60
56
56
52
52
8
4
0
1362

To face p 34.

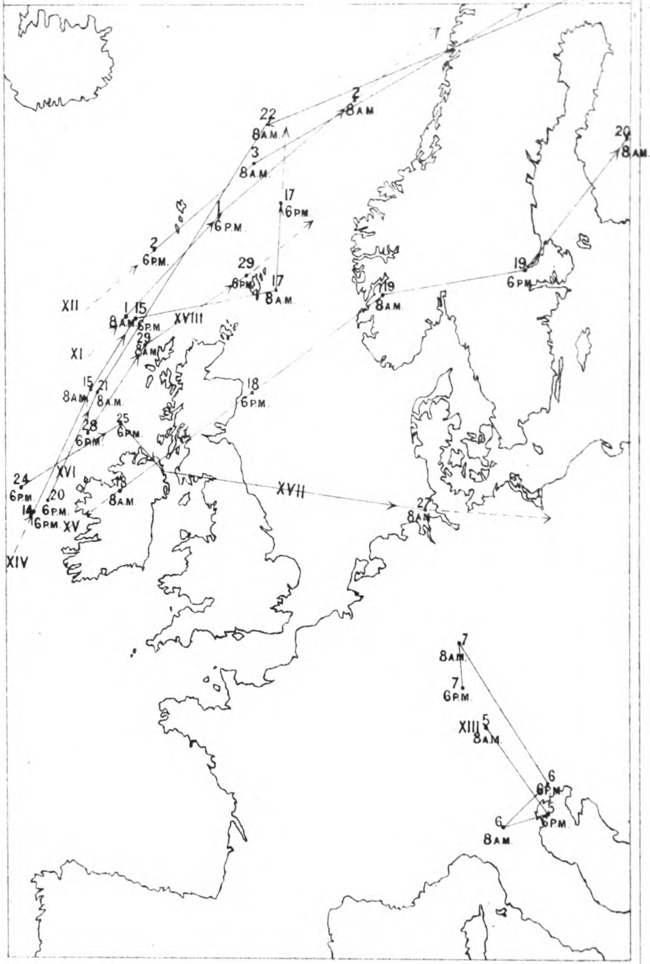
DANGERFIELD LITH 22 BEDFORD S^T COVENT GARDEN

MONTHLY WEATHER CHART – FEBRUARY 1876.



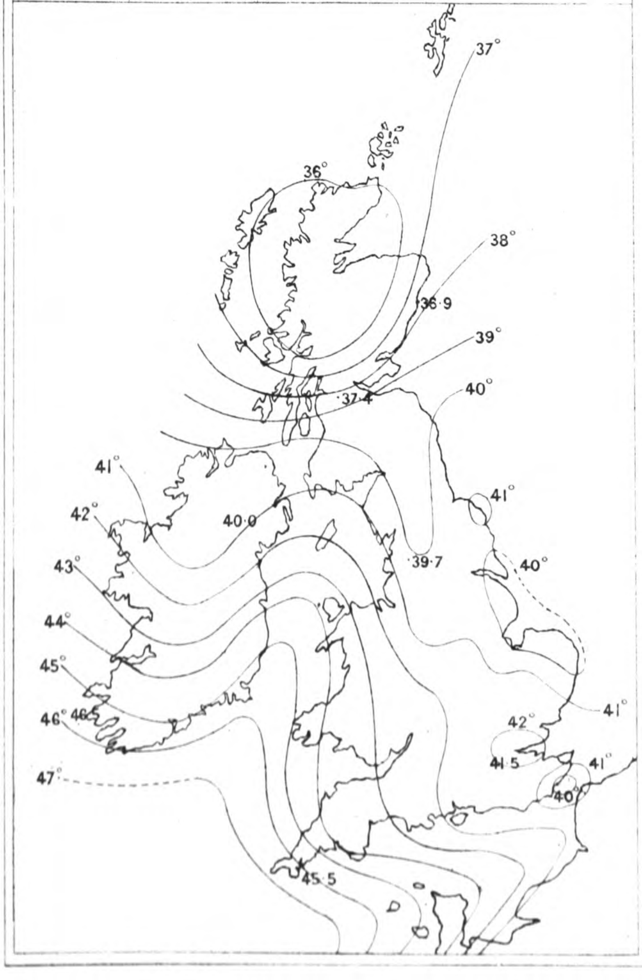
1. DISTRIBUTION OF MEAN PRESSURE

29·60
29·658
29·662
29·65
29·697
29·729
29·70
29·718
29·75
29·821
29·80
29·856
29·85



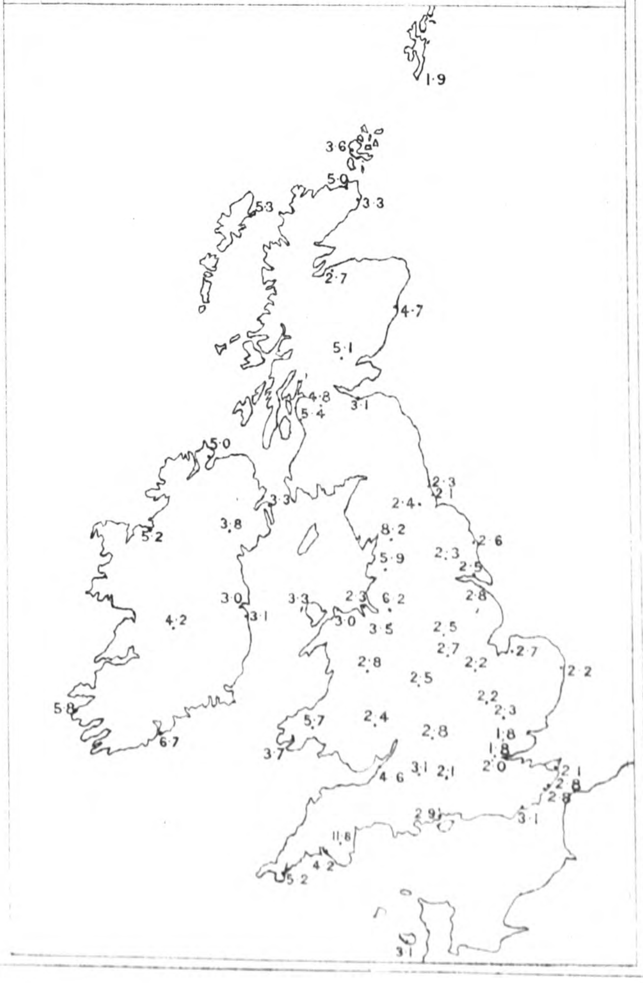
2. MOVEMENTS OF DEPRESSIONS

23 8 A.M.
2 8 A.M.
22 8 A.M.
3 8 A.M.
20 8 A.M.
17 6 P.M.
1 6 P.M.
2 6 P.M.
29 6 P.M.
17 8 A.M.
19 8 A.M.
19 6 P.M.
XII
1 8 A.M.
15 6 P.M.
XVIII
XI
29 8 A.M.
15 8 A.M.
21 8 A.M.
18 6 P.M.
28 6 P.M.
25 6 P.M.
24 6 P.M.
XVI
18 8 A.M.
XVII
20 6 P.M.
14 6 P.M.
XV
27 8 A.M.
XIV
7 8 A.M.
7 6 P.M.
XIII
5 8 A.M.
6 6 P.M.
6 P.M.
6 8 A.M.



3. DISTRIBUTION OF MEAN TEMPERATURE

37°
36°
38°
36·9
39°
40°
37·4
41°
41°
42°
40·0
39·7
40°
43°
44°
45°
46° 46·5
41°
42°
41·5
41°
40°
47°
45·5



4. RAINFALL

1·9
3·6
5·0
5·3
3·3
2·7
4·7
5·1
4·8
5·4
3·1
5·0
2·3
2·1
3·3
2·4
3·8
8·2
2·6
5·2
5·9
2·3
2·5
2·8
3·0
3·3
2·3
6·2
3·1
3·0
3·5
4·2
2·5
2·7
2·7
2·2
2·8
2·2
2·5
2·2
2·3
5·8
5·7
2·4
2·8
1·8
1·8
3·7
6·7
3·1
2·1
2·0
2·1
4·6
2·8
2·8
2·9
3·1
11·8
4·2
5·2
3·1

To follow Wind Chart for February.

DANGERFIELD, LITH 22 BEDFORD ST COVENT GARDEN

REMARKS FOR MARCH 1876.

(*Tables A. to C.,* MAR., *with Monthly Wind and Weather Charts.*)

Wind.—March commenced with south-westerly and westerly winds, which continued for some days; they were strong generally, and blew a severe gale at times over the more northern districts. After the 9th the wind veered to the north-westward, and on the 12th, owing to the advance of a very deep secondary depression across our southern districts, strong easterly to north-easterly winds and gales were felt temporarily in many parts of England, while furious westerly gales swept over our southern counties and France. The wind then returned to N.W. and W., from which points it again blew hard on the 14th and 15th, but subsequently moderated permanently. On March 18th the wind shifted to the northward very generally, and on the 22nd, owing to the advance of a small depression over the S. of France, it veered to N.E., except at our more northern stations, where it was light from W. to N.W. On March 24th a very temporary spell of southerly wind was felt all over the kingdom, but then the vane backed quickly to the eastward and remained there till the 27th. After the 27th the wind varied very much in direction till the end of the month. Thus the prevailing winds were distinctly south-westerly and westerly, and were very strong in force, while the winds from other points were comparatively temporary, and generally moderate or light in strength.

Pressure.—Pressure was on the whole highest at our south-western and lowest at our most northern stations. In all districts it was considerably lower than in either January or February, and the mean gradients were steep. The lowest readings observed (and they were very low) occurred during the passage of the very deep depression which passed over us between the 8th and 10th; while the highest were registered during the cold northerly breezes which prevailed on the 19th, except at Aberdeen, and here a still higher value than that of the 19th was recorded on the 21st. The range for the month was large generally, especially in the extreme W. and N., where it amounted to more than 2 inches.

Movements of the Depressions.—The depressions observed were large and deep, and moved generally in an easterly direction. Their tracks lay chiefly to the northward of our islands; several well-marked subsidiary (or satellite) disturbances were observed, and that which passed over our southern districts on the 12th was unusually deep, and very rapid in its motion.

The high-pressure area over the peninsula was very persistent until the 16th, when it moved northward of our western coasts. After the 20th readings were comparatively uniform, and a local anticyclone was observed over Belgium on the 24th.

Temperature.—The mean temperature (at the sea level) varied from about 44° at Scilly and Valencia to rather below 40° in the N. of Ireland and N.E. of England, and to a little below 38° in the northern parts of Scotland. These values, when compared with those shown by Mr. Buchan's charts for the 13 years 1857–69 show a deficit of about 3° at our extreme South-western station, which decreases to about 1° only over the Northern parts of the Kingdom.

The lowest reading observed occurred between the 18tha nd 23rd in most places during the prevalence of the same northerly winds in which the highest pressures were observed. The principal exception was in the S. of Ireland, where the lowest temperature was observed early on the 9th. This is very remarkable, as at that time a strong westerly breeze prevailed in that region. The highest readings occurred at almost all the Self-reading Observatories between the 3rd and 5th, but at Kew and at many of the English Stations of the Second Order and Telegraphic Reporting Stations this was not so, the maxima being recorded there on the 31st. The range was not large, except over England, where it amounted to more than 38° in some places, but to only 33° at Kew. The excess of range over England seems largely owing to the high maxima which occurred there on the 31st, and which were considerably in excess of the high readings recorded in other places early in the month.

Vapour Tension was lowest (0·17 inches to 0·19 inches) over central Scotland and the N. of England, highest at the Channel Islands and on our S.W. coasts; but Relative Humidity was highest in the N. and N.E., lowest in the S. and S.W.

Rainfall.—This was greater than in February, but was again least at the low-lying English, greatest at the Irish and Scotch stations. At the hill stations in England the falls were as usual heavier than in the plains, but the difference was less noticeable than in February.

TABLE A., MAR.—SHOWING the MEAN and EXTREME PRESSURES and TEMPERATURES recorded at each of the SEVEN SELF-RECORDING OBSERVATORIES of the METEOROLOGICAL OFFICE during the Month of March 1876, together with the MONTHLY VAPOUR TENSION, the RELATIVE HUMIDITY, and TOTAL RAINFALL.

NAMES OF OBSERVATORIES.	PRESSURE at 32° F. and the Mean Sea Level. (In English Inches.)						TEMPERATURE In the Shade. (In Degrees Fahrenheit.)						HYGROMETRIC VALUES.		RAIN FALL. (In English Inches.)
	Mean for the Month.	Extremes.				Range.	Mean or the Month.	Extremes.				Range.	Tension of Vapour. (In English Inches.)	Relative Humidity (Saturation = 100.)	
		Minimum.		Maximum.				Minimum.		Maximum.					
		Reading.	Date.	Reading.	Date.			Reading.	Date.	Reading.	Date.				
Valencia - -	ins. 29·620	ins. 28·381	D. H. 10th, 2 a.m.	ins. 30·416	D. H. 19th, 2 a.m.	ins. 2·035	° 43·9	° 30·9	D. H. 9th, 4 a.m.	° 54·0	D. H. 2nd, 8 p.m.	° 23·1	in. ·225	% 78	ins. 5·333
Armagh - -	·517	·547	9th, 3 p.m. 10th, 4 a.m.	·314	19th, 7 & 8 p.m.	1·767	38·7	28·0	18th, 11 p.m.	55·1	3rd, Noon	27·1	·202	86	3·370
Glasgow - -	·406	·282	9th, Midt.	·242	19th, 10 p.m.	1·960	38·1	25·0	20th, 5 a.m.	53·0	3rd, 3 p.m.	28·0	·184	80	4·210
Aberdeen - -	·342	·021	9th, Midt. 10th, 1 a.m.	·185	21st, Midt.	2·164	37·3	24·0	18th, 2 p.m.	51·6	3rd, 5 p.m.	27·6	·184	83	4·915
Falmouth - -	·657	·586	10th, 8 a.m.	·236	19th, 11 p.m.	1·650	43·5	32·5	23rd, 4 a.m.	53·7	5th, 1 p.m.	21·2	·231	82	7·035
Stonyhurst -	·499	·509	10th, 6 a.m.	·187	19th, 11 p.m.	1·678	39·1	25·5	20th, 5 a.m.	54·0	3rd, 3 p.m.	28·5	·193	81	4·489
Kew - -	29·592	28·468	12th, Noon	30·101	19th, 10 p.m.	1·633	41·6	27·7	21st, 6 a.m.	60·9	31st, 1 p.m.	33·2	·207	79	2·509

TABLE B., MAR.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at STATIONS
are not corrected

(The Stations are grouped in Districts, and then arranged in order of

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit, and Mean Sea Level) from Observations made at 9 a.m. and 9 p.m.	AIR TEMPERATURE.									
						Means of			Absolute Extremes.			
			At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.
		ins.	°	°	°	°	°	°	°		°	
0. SCOTLAND, N.	Sandwick Manse (Orkneys)	29·293	37·5	36·8	37·2	34·0	41·2	37·6	25·6	18th	46·9	4th
1. SCOTLAND, E.	Glenalmond	29·394	36·0	35·3	35·7	30·5	41·0	35·8	21·5	13th & 21st	51·0	3rd
2. ENGLAND, N.E.	Seaham	29·444	39·8	38·6	39·2	33·6	45·2	39·4	24·8	19th & 20th	59·7	3rd
	Durham	29·426	40·4	36·8	38·6	32·2	45·4	38·8	23·7	20th	61·4	31st
	Hull	29·499	39·6	38·8	39·2	34·5	46·1	40·3	26·0	19th	56·5	31st
	Kelstern (Calcethorpe)	29·512	38·1	37·2	37·7	32·5	44·5	38·5	23·6	19th	59·8	31st
3. ENGLAND, E.	Hillington	29·503	40·5	38·6	39·5	33·0	47·1	40·1	21·2	21st	60·2	31st
	Audley End	29·581	41·3	39·6	40·4	34·2	47·4	40·8	24·0	22nd	61·7	31st
	Chigwell Row	29·615	41·5	40·0	40·8	34·2	47·7	41·0	24·3	22nd	62·0	31st
4. MIDLAND COUNTIES.	Buxton	29·540	37·1	35·3	36·2	30·9	42·6	36·8	21·5	19th	54·9	2nd
	Cheadle	29·539	37·8	36·2	37·0	31·4	43·4	37·4	20·1	20th	53·3	31st
	Leicester	29·546	39·9	39·9	39·9	34·2	46·5	40·4	24·4	19th	60·7	31st
	Churchstoke	29·588	38·9	37·8	38·4	32·0	46·4	39·2	17·4	19th	55·2	3rd
	Oscott	29·558	38·8	37·6	38·2	32·7	45·8	39·3	21·2	20th	56·1	31st
	Uppingham	29·545	38·7	37·4	38·1	32·5	45·1	38·8	23·2	19th	59·7	31st
	Hereford	29·577	40·7	38·8	39·8	34·0	46·8	40·4	19·4	19th	57·9	3rd
5. ENGLAND, S.	Marlborough	29·607	40·0	38·2	39·1	33·8	46·6	40·2	24·7	20th	59·6	31st
	Strathfield Turgiss	29·603	41·2	38·9	40·1	33·7	47·7	40·7	20·3	22nd	60·5	31st
	Ramsgate	29·511	42·7	41·2	42·0	36·6	47·7	42·2	27·8	19th	55·5	28th
	Folkestone	29·595	41·1	40·0	40·6	36·0	47·8	41·9	26·8	19th	60·2	31st
	Hastings	29·615	41·9	40·0	41·0	36·2	46·9	41·6	25·5	19th	57·5	31st
6. SCOTLAND, W.	—	—	—	—	—	—	—	—	—	—	—	—
7. ENGLAND, N.W.	Hawes	29·492	36·3	35·2	35·8	31·0	41·0	36·0	20·0	18th	55·0	31st
	Llandudno	29·528	42·2	40·5	41·4	36·8	47·7	42·3	26·2	18th	56·6	3rd
8. ENGLAND, S.W.	Caermarthen	29·572	42·3	39·9	41·1	35·3	48·1	41·7	25·0	19th	54·4	30th
	Dartmoor	29·722	37·2	35·9	36·6	31·4	41·8	36·6	21·0	19th	48·2	2nd, 3rd, & 14th
9. IRELAND, N.	Markree Castle	29·522	39·8	37·4	38·6	32·9	46·6	39·8	26·6	12th	55·4	3rd
10. IRELAND, S.	Dublin	29·561	40·4	39·8	40·1	36·2	45·9	41·1	28·2	19th	57·3	3rd
	Parsonstown	29·578	39·7	38·4	39·1	33·6	46·9	40·3	24·6	23rd	56·8	3rd
CHANNEL	Jersey (St. Aubins)	29·715	44·7	43·2	44·0	39·2	48·7	44·0	30·0	19th	54·8	6th

of the SECOND ORDER in the BRITISH ISLANDS, during the month of March 1876. The values for Diurnal Range.

Latitude, beginning in each case with the Station lying furthest North.)

TENSION OF VAPOUR.			RELATIVE HUMIDITY.			AMOUNT OF CLOUD (0 to 10).			RAINFALL.			WEATHER, No. of Days of							WIND, No. of Observations of								
At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
ins. ·207	ins. ·201	ins. ·204	% 92	% 93	% 93	7·3	7·0	7·2	ins. 4·280	in. ·480	25th	30	6	0	0	1	9	8	10	5	5	9	10	2	10	8	3
·167	·174	·171	77	82	79	7·6	6·6	7·1	4·360	·760	8th	22	11	1	0	1	13	1	4	1	1	7	5	19	8	6	7
·221	·219	·220	91	94	93	5·6	5·2	5·4	2·290	·400	29th	19	12	5	1	5	6	1	1	2	3	4	7	10	10	9	6
·202	·191	·196	80	88	84	6·9	6·4	6·7	3·242	·972	29th	17	10	2	1	3	13	1	4	2	5	4	6	15	13	10	5
·203	·209	·206	83	89	86	6·5	3·7	5·1	3·770	1·100	27th	23	8	3	3	3	4	2	4	7	5	2	2	19	13	10	0
·203	·198	·201	86	87	87	6·5	5·4	6·0	2·746	·724	27th	21	12	2	1	2	8	2	4	4	6	2	5	16	20	3	2
·214	·204	·209	85	87	86	6·1	5·6	5·8	2·531	·520	12th	20	8	1	2	4	9	8	2	5	3	5	5	17	15	8	2
·212	·211	·212	82	87	85	7·2	5·2	6·2	2·830	·690	12th	20	10	2	1	2	10	0	1	8	0	1	0	23	5	15	9
·219	·217	·218	84	88	86	7·2	5·5	6·4	3·100	·590	27th	15	10	5	0	1	11	0	5	10	2	5	11	15	13	1	0
·190	·179	·185	85	85	85	7·1	7·3	7·2	6·145	1·080	5th	23	12	2	1	1	12	5	4	3	9	2	1	6	23	13	1
·192	·186	·189	85	87	86	6·5	7·2	6·9	3·660	·470	2nd	23	13	5	2	2	9	1	3	6	7	1	1	11	16	8	9
·196	·196	·196	79	79	79	6·7	6·3	6·5	2·820	·520	27th	24	5	0	0	1	12	1	1	8	2	1	0	20	17	4	9
·211	·198	·205	86	85	85	7·2	6·8	7·0	2·945	·520	8th	22	10	9	0	0	8	5	4	4	1	2	6	15	13	8	9
·197	·203	·200	81	88	84	7·0	7·6	7·3	2·230	·330	30th	25	13	6	2	0	13	5	4	7	4	0	7	15	16	7	2
·211	·206	·209	90	92	91	6·8	6·2	6·5	2·627	·548	12th	22	10	2	1	2	11	4	6	1	5	4	5	15	17	6	3
·202	·205	·204	79	85	82	7·0	6·5	6·8	2·730	·450	30th	21	2	0	0	1	12	0	4	3	6	3	1	8	15	10	12
·212	·208	·210	86	90	88	6·6	6·9	6·8	4·201	·580	11th	20	8	3	0	3	12	0	5	4	2	1	7	5	23	4	11
·224	·215	·220	85	88	86	6·3	6·3	6·3	3·319	·665	27th	18	8	2	4	4	12	0	10	2	3	4	5	16	7	10	5
·226	·217	·222	81	82	82	7·0	5·7	6·4	2·255	·410	11th&27th	13	4	4	0	2	11	7	8	5	5	0	10	15	15	3	1
·230	·224	·227	89	91	90	6·6	5·1	5·9	2·390	·400	11th	19	8	1	1	4	9	5	5	4	5	3	10	12	16	5	2
·228	·214	·221	84	84	84	6·0	4·6	5·3	2·905	·750	11th	24	7	3	1	7	7	9	7	7	3	1	6	22	14	2	0
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
·179	·181	·180	81	86	84	8·3	7·5	7·9	8·370	1·190	8th	27	18	6	1	2	22	1	4	2	8	1	0	14	19	6	8
·207	·204	·205	77	81	79	7·1	6·2	6·6	2·890	·600	5th	16	9	3	2	1	11	5	6	3	10	1	5	7	25	5	0
·224	·218	·221	82	87	84	6·8	6·0	6·4	3·500	·570	5th	21	6	5	1	0	10	0	6	2	10	0	1	9	16	9	9
·209	·205	·207	92	95	94	8·1	6·9	7·5	7·520	1·080	11th	27	13	1	0	1	15	14	7	1	10	1	3	5	14	18	3
·313	·199	·206	86	87	87	8·3	6·9	7·6	5·264	·456	8th	28	8	12	0	1	16	0	3	7	4	8	10	11	5	9	5
·204	·202	·203	81	82	82	6·6	5·3	6·0	2·158	·400	5th	23	8	10	1	4	9	4	5	4	4	3	4	5	27	9	1
·213	·209	·211	86	88	87	7·0	7·3	7·2	4·438	·466	2nd	24	3	0	0	2	15	0	3	3	2	2	4	11	19	8	10
·244	·238	·241	81	83	82	7·7	7·4	7·6	4·739	·393	5th	28	7	9	0	0	15	7	4	7	5	5	4	10	18	7	2

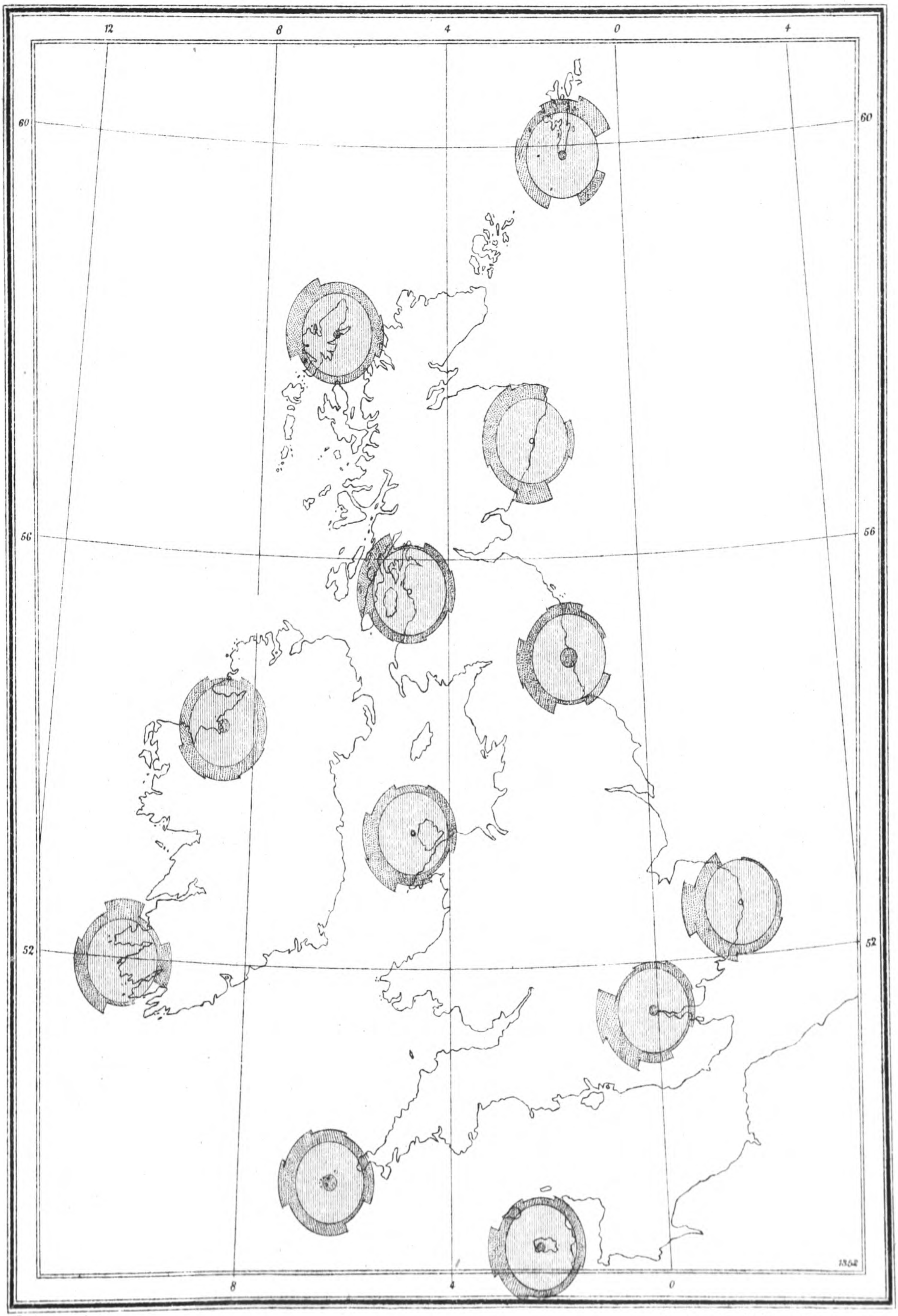
TABLE C., MAR.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC REPORTING STATIONS in the BRITISH ISLANDS during month of March 1876. Observations are made at 8 a.m. daily.

(The Stations are grouped in Districts, and then arranged in order of Latitude, beginning in each case with the Station lying furthest North.)

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	AIR TEMPERATURE.								TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.			WEATHER, No. of Days of							WIND, No. of Observations of								
				Means of			Absolute Extremes.																									
			At 8 a.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.				Total Fall in the Month.	Maximum Fall in one Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
		ins.	°	°	°	°	°		°		ins.	%		ins.	ins.																	
0. SCOTLAND, N.	Sumburgh Head	29·232	37·1	32·3	41·2	36·8	22	20th	47	2nd, 31st	·190	86	7·3	4·65	0·58	18th	30	2	0	0	2	13	3	6	7	0	4	0	5	5	3	1
	Stornoway	29·317	36·6	31·7	42·1	36·9	21	17th	50	3rd, 25th	·194	90	8·1	5·71	0·55	9th	29	7	0	0	1	8	10	3	3	4	2	2	2	7	7	1
	Thurso	29·287	37·2	33·2	43·9	38·6	25	22nd	52	3rd,	·191	86	8·6	5·89	0·59	9th	31	5	0	0	0	18	7	6	2	3	2	7	2	2	4	3
	Wick	29·287	36·6	31·8	41·9	36·9	23	18th, 19th	50	24th	·188	87	7·0	3·75	0·54	9th	29	3	0	0	4	16	7	4	2	2	5	2	5	3	8	0
1. SCOTLAND, E.	Nairn	29·339	35·3	32·7	42·5	37·6	25	17th, 18th, 19th.	56	3rd,	·181	88	7·0	4·25	1·07	30th	26	7	2	0	5	16	4	1	3	1	0	1	3	6	9	7
	Aberdeen	29·318	37·2	33·7	42·5	38·1	25	13th, 19th	51	3rd	·185	83	6·0	4·93	0·91	9th	25	6	0	1	7	10	6	5	0	2	1	7	4	5	7	0
	Leith	29·392	37·2	32·9	46·0	39·5	25	21st	58	3rd	·196	88	7·0	2·68	0·42	29th	20	4	1	0	4	14	5	2	2	3	2	1	7	10	4	0
2. ENGLAND, N.E.	Shields	29·429	37·8	34·1	44·4	39·3	26	18th	57	3rd	·196	87	6·5	1·98	0·28	29th	18	11	4	0	6	11	8	5	2	0	3	1	6	7	4	3
	Scarborough	29·454	39·8	35·4	44·4	39·9	26	19th	55	3rd	·211	83	6·9	3·67	0·87	27th	21	3	0	1	6	13	6	2	1	4	2	1	8	10	3	0
	York	29·484	37·6	33·0	46·2	39·6	24	19th	61	31st	·211	94	6·0	2·92	0·58	29th	21	1	1	0	7	11	3	4	3	0	2	4	6	9	3	0
3. ENGLAND, E.	Yarmouth	29·524	38·9	34·8	44·9	39·9	26	19th	55	3rd	·221	94	4·7	2·96	0·56	12th	20	3	2	0	16	9	7	0	1	2	3	3	5	11	6	0
	Cambridge	29·552	39·2	33·7	49·4	41·6	23	22nd	64	31st	·210	88	7·1	2·48	0·78	27th	23	6	3	0	5	15	0	2	2	2	1	3	13	4	4	0
4. MIDLAND COUNTIES.	Nottingham	29·536	38·5	32·5	47·2	39·9	24	19th	63	31st	·208	90	6·4	2·98	0·39	27th	26	10	8	2	9	16	1	3	2	1	2	6	9	4	4	0
	Oxford	29·570	39·2	35·1	46·7	40·9	26	19th, 22nd	61	31st	·207	86	7·0	3·44	0·51	12th	21	3	1	0	6	16	1	1	2	3	0	4	7	8	3	3
5. ENGLAND, S.	London	29·577	41·0	35·9	49·5	42·7	26	23rd	64	31st	·213	83	6·7	2·53	0·47	1st	19	3	1	0	7	15	1	2	3	2	1	3	8	10	1	1
	Dover	29·582	41·1	37·0	46·4	41·7	28	19th	56	31st	·218	85	5·2	1·39	0·52	1st	19	1	1	0	9	7	3	2	2	3	2	1	11	8	2	0
	Hurst Castle	29·604	41·9	36·6	46·5	41·6	27	19th	52	31st	·244	92	5·7	3·20	0·76	11th	25	3	1	1	10	12	7	2	2	3	0	3	5	9	6	1
6. SCOTLAND, W.	Ardrossan	29·431	39·4	35·8	45·3	40·6	29	17th, 21st	53	25th	·193	80	7·5	5·28	0·73	8th	20	4	2	2	4	16	10	1	3	4	2	3	4	7	7	0
7. ENGLAND, N.W.	Liverpool	29·497	40·0	35·6	45·6	40·6	28	19th	56	3rd	·194	78	6·3	1·99	0·42	5th	18	2	1	1	6	13	11	1	3	3	4	1	7	10	2	0
	Holyhead	29·516	41·0	37·7	46·5	42·1	32	19th, 20th	53	3rd	·215	84	6·3	1·87	0·41	8th	24	0	4	0	5	7	9	2	3	3	1	3	8	7	4	0
8. ENGLAND, S.W.	Pembroke	29·593	41·3	38·1	45·8	42·0	31	19th, 20th, 22nd.	51	25th, 30th,	·217	84	6·2	2·29	0·28	30th	22	0	0	0	5	10	11	2	2	3	1	1	5	8	8	1
	Pertishead	29·582	39·7	34·3	47·8	41·1	26	22nd	55	3rd, 28th	·212	87	5·7	3·85	0·66	9th	22	2	1	1	8	9	10	2	4	3	0	3	9	8	2	0
	Plymouth	29·630	42·1	37·6	49·4	43·5	29	18th	57	14th	·240	90	6·6	3·57	0·90	11th	25	0	0	0	6	15	7	2	2	5	2	0	6	7	7	0
9. IRELAND, N.	Greencastle	29·434	39·0	32·6	46·6	39·6	27	17th	54	3rd	·199	84	7·6	6·13	0·79	14th	24	4	2	0	6	21	4	5	2	3	1	2	2	12	4	0
	Donaghadee	29·472	38·4	34·5	44·8	39·7	29	12th, 17th	54	3rd	·204	88	6·6	2·08	0·27	8th	27	3	2	0	6	16	7	3	3	3	1	4	6	7	4	0
10. IRELAND, S.	Kingstown	29·539	39·8	36·7	45·3	41·0	30	19th	58	3rd	·198	81	5·7	2·05	0·40	8th	18	0	0	0	10	8	8	1	1	2	2	3	3	13	5	1
	Roche's Point	29·616	41·1	37·1	46·9	42·0	31	9th	55	5th	·222	86	5·5	5·88	0·75	8th	24	3	3	0	6	8	8	6	2	2	1	0	4	6	10	0
	Valencia	29·632	43·5	36·6	49·2	42·9	29	23rd	55	2nd, 3rd	·229	81	6·0	4·64	0·51	9th	24	1	4	0	7	6	11	8	2	6	0	1	5	6	3	0
—	Scilly	29·650	44·9	40·1	48·8	44·5	34	10th	54	3rd, 28th	·252	85	7·8	4·27	0·67	27th	25	0	0	0	0	8	12	4	2	3	1	3	3	7	6	2

MONTHLY WIND CHART – MARCH 1876.

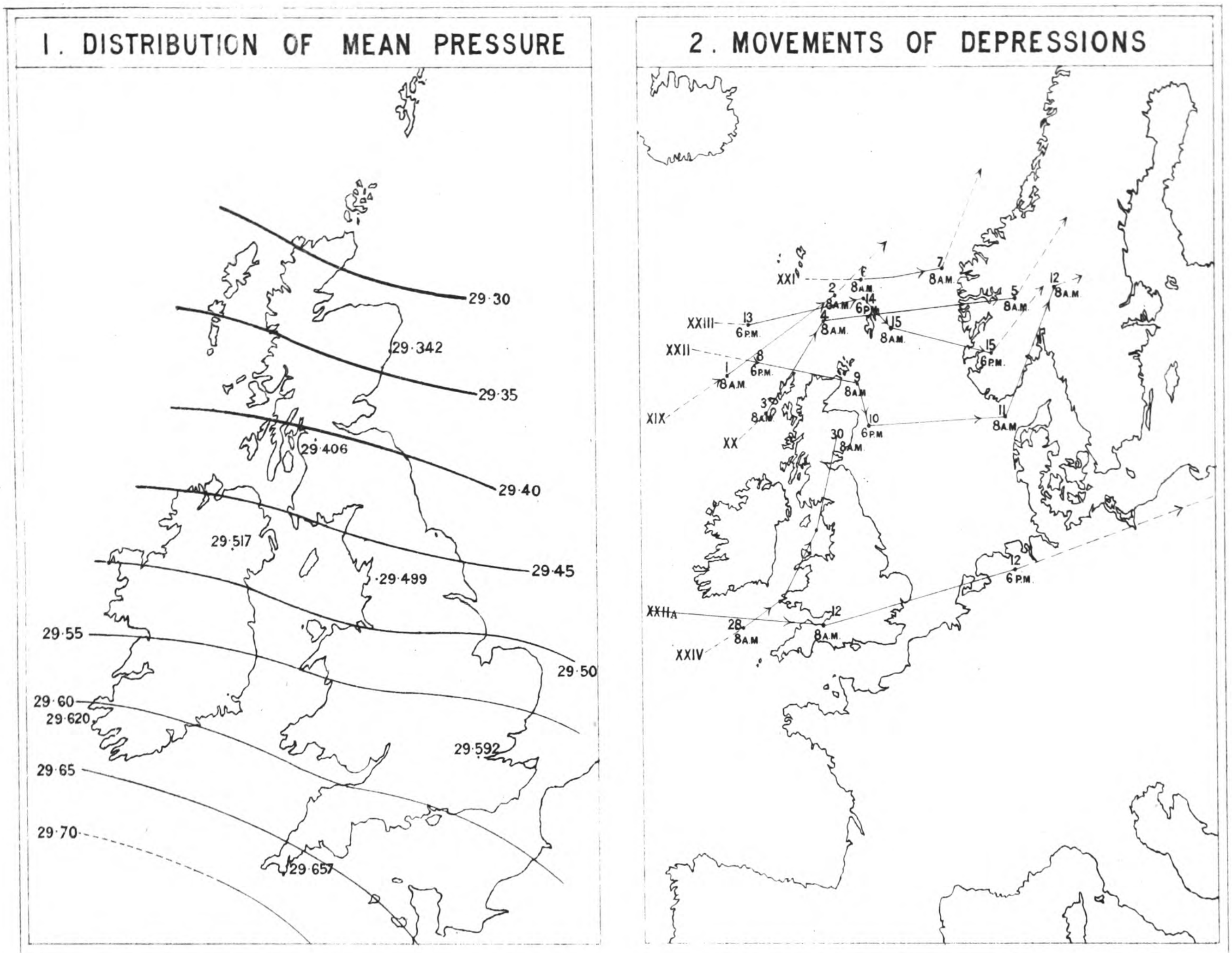
Showing the Relative Prevalence of Wind from 8 points.


12
8
4
0
4
60
60
56
56
52
52
8
4
0
1382

To face p. 40.

Dangerfield Lith. 22. Bedford St. Covent Garden

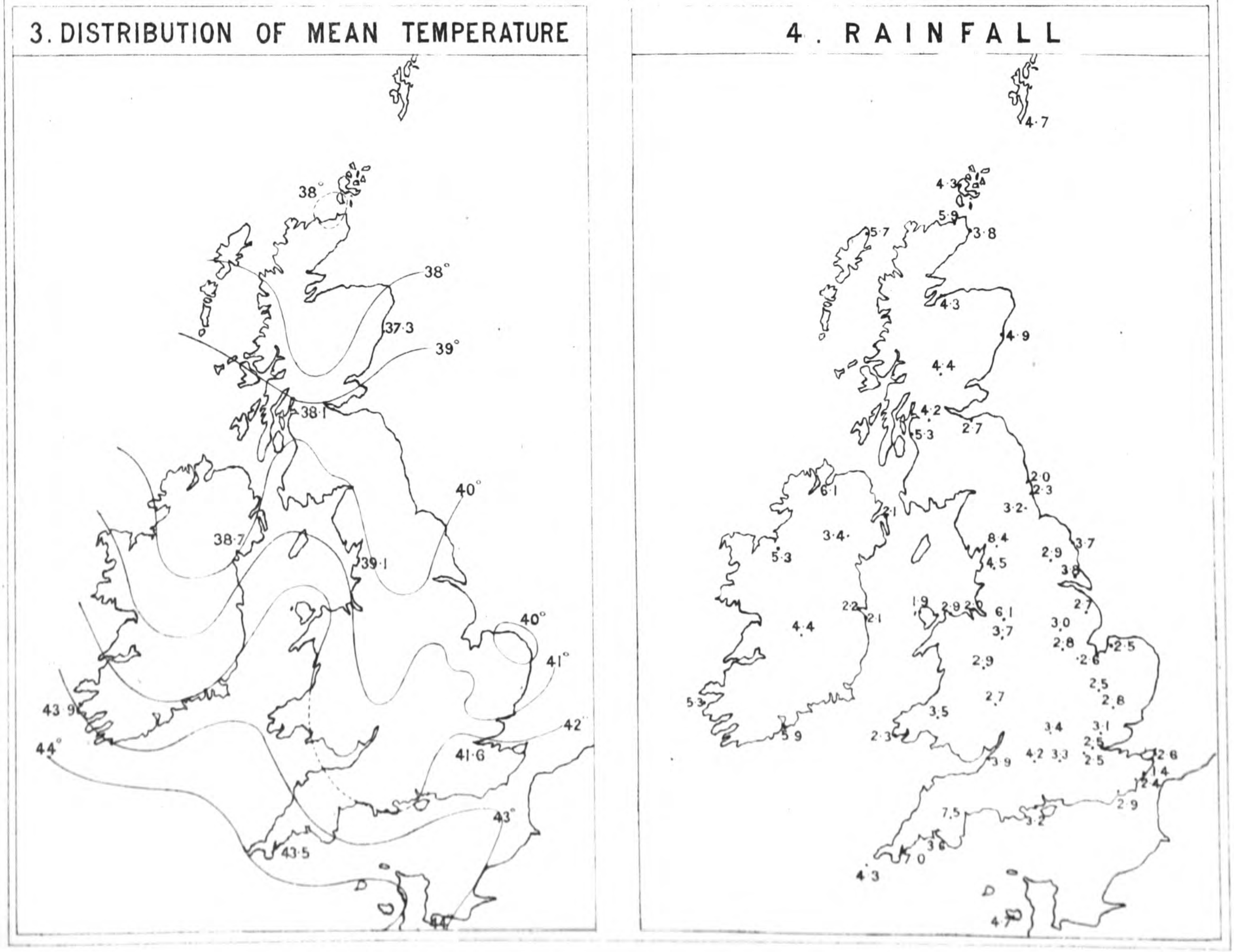
MONTHLY WEATHER CHART—MARCH 1876.



1. DISTRIBUTION OF MEAN PRESSURE

2. MOVEMENTS OF DEPRESSIONS

29·30
29·342
29·35
29·406
29·40
29·517
29·499
29·45
29·55
29·50
29·60
29·620
29·592
29·65
29·70
29·657
XXI
6
8 A.M.
7
8 A.M.
2
8 A.M.
14
6 P.M.
5
8 A.M.
12
8 A.M.
XXIII
13
6 P.M.
4
8 A.M.
15
8 A.M.
15
6 P.M.
XXII
8
6 P.M.
1
8 A.M.
9
8 A.M.
XIX
3
8 A.M.
10
6 P.M.
11
8 A.M.
XX
30
8 A.M.
12
6 P.M.
XXII A
28
8 A.M.
12
8 A.M.
XXIV



3. DISTRIBUTION OF MEAN TEMPERATURE

4. RAINFALL

38°
38°
37·3
39°
38·1
40°
38·7
39·1
40°
41°
43·9
42°
44°
41·6
43°
43·5
44
4·7
4·3
5·9
3·8
5·7
4·3
4·9
4·4
4·2
5·3
2·7
2·0
2·3
6·1
2·1
3·2
3·4
8·4
4·5
5·3
2·9
3·7
3·8
2·7
2·2
2·1
1·9
2·9
2·0
6·1
3·7
3·0
4·4
2·8
2·5
2·6
2·9
2·5
2·8
5·3
2·7
3·5
3·4
3·1
5·9
2·3
2·5
4·2
3·3
2·5
2·6
3·9
1·4
2·4
2·9
7·5
3·2
3·6
7·0
4·3
4·7

To follow Wind Chart for March.

DANGERFIELD LITH 22 BEDFORD ST COVENT GARDEN

PART II.

SECTION I.

The weather over the British Islands during this quarter was marked by a complete transition from the spring to the summer season. The extremes of temperature were clear and decided. The cold which accompanied the anticyclones in April was sharp; but the lowest temperatures for the quarter were recorded with the Northerly and North-easterly winds which set in on April 13th, in the rear of Cyclonic System No. XXVI., while the highest were experienced about the 20th or 21st of June over England, and on the 25th or 26th elsewhere. Some of the anticyclones were well-formed and high, the highest pressure recorded over our islands being considerably above 30·5 inches, early in May; but the cyclones were few in number, and, as a rule, neither deep nor large.

April 1st–8th.—In this period the weather was fine with high barometric readings across the greater part of Western Europe, the wind being chiefly South-westerly at first, but subsequently lulling to a calm. Anticyclonic areas were developed on the British Isles about the 5th; fog and haze were often prevalent between the 5th and 7th, about which time the barometer began to fall, and Southerly breezes set in on our Western coasts. Temperature was at times high, the daily range large, and the rainfall almost *nil.*

April 9th–14th.—The high pressure area of the first week gave way to a series of cyclones, the centres of which passed in an Easterly or South-easterly direction over the British Isles, bringing with them exceedingly changeable and inclement weather. In the rear of each the barometer rose quickly, the wind veered completely round to the Northward, the thermometer fell very low, and large quantities of snow, hail, and rain fell over England, accompanied by strong winds and thunderstorms.

April 15th–16th.—On these days an area of high pressure again stretched across Western Europe from the North-eastward. The Northerly winds were dying down, the barometer was rising, and South-westerly winds were again becoming general, appearing first in the extreme W. and N.W., and then gradually spreading Eastwards over the country.

April 17th–22nd.—In this period the weather was changeable and showery; it was very cold in the West towards the latter part of the time, and some snow fell, as the wind there became Northerly, in the rear of the depression (No. XXVII.), which came over us from the Westward. In the East and South, however, it remained mild.

April 23rd–May 1st was also a showery, unsettled period. Southerly to Westerly winds prevailed till the 28th, but a complex depression (Nos. XXIX. and XXIXA.)

then advanced to our Western coasts, and, passing South-eastwards (while pressure increased in the North), drew the wind into N.E. and N., and caused a decided fall of temperature. Thunderstorms occurred in the South and solar halos were seen in several places.

May 2nd–20th.—This high pressure in the North continued, and gave rise to anticyclones, marked at first by variable airs and calms, and subsequently by North-easterly breezes, and continuously dry weather. Over England and Ireland the nights were very cold and sharp, and the Easterly winds, as they freshened during the daytime, were felt to be very "searching."

After a temporary interruption of the fine dry weather, by the formation of cyclonic conditions over the North Sea, accompanied by showers in most places, the wind again became North-easterly over the United Kingdom on the 16th, and soon increased to a strong breeze over our Southern districts and France. A depression was formed over the Southern part of the Bay of Biscay on the 17th, and produced rain for some days at the South-westward of the French stations, while fine weather prevailed in our Islands. It was not until the 19th that South-westerly breezes began to set in even at our most Northern stations.

May 21st–27th.—During this interval the weather was distinctly cyclonic in its general characteristics, and as the low pressure areas lay to the Eastward and South-eastward of our Islands during the later half of the time, the wind (which had previously been warm and South-westerly) veered to N.W. and N., accompanied by thunderstorms, and followed by a decided fall of temperature, dull weather, and cold rain. Halos were reported in many places prior to the change.

May 28th–June 1st.—The weather during this interval improved materially, especially over England and Ireland. The high pressure area gradually advanced from the Westward across Central Europe. Pressure became uniformly high over the South-western and Southern districts, where the winds fell light and the sky cleared, In the N.W. and N., however, showers still fell (more particularly on the 30th), but the amount of rain was small.

June 2nd–7th was a cyclonic period of South-westerly and Westerly winds, and these were at first accompanied by damp, changeable weather. After the 6th, however, pressure became more uniform, the winds fell lighter, the weather over England cleared decidedly, and temperature rose quickly. Maximum readings as high as 69° were recorded in some places in England.

June 8th–10th.—In this short period a depression (No. XXXIII.) was formed over France, and, travelling Northwards, brought about a brief spell of Northerly wind, a slight fall of temperature, and, at first, some rain. On the 10th, however, the sky cleared, and the wind began to return to the West and South-west in Scotland, and to N.W. in England.

June 11th–13th.—This was a transition period, during which high pressure again became established over Europe, with lower barometric readings to the Northward.

The South-westerly current of wind encroached on us, setting in first on our N.W. coasts, and then spreading gradually to the Southward and Eastward. Temperature rose very considerably, as the weather was bright, so that on the 11th some of the maxima recorded over Scotland and Ireland ranged from 70° to 75°. On the 12th the Scotch readings were lower, but those over the central and Southern parts of England were as high as 80°. This state of things, however, did not last long, for during the interval of

June 14th–17th depressions began to appear off our W. and N.W. coasts, travelling in a North-easterly direction, and a well-marked subsidiary disturbance passed over England. Heavy rains fell, first at the Irish stations, and subsequently over England, while in the north the weather was finer. Temperature fell considerably everywhere, and much cloud prevailed.

June 18th–26th.—In this time a high pressure area extended from the Peninsula across France to Germany, and thence to Northern Europe. While it did so the wind over the British Isles and the North Sea backed to the Southward, and, as for a few days no cyclonic system reached us, the sky cleared and the weather again became very warm. The maximum temperatures for the month occurred on the 20th or 21st at most of the English stations, and the only districts where even a little rain fell were our extreme South-western coasts. After the 20th, however, a change occurred; very shallow local depressions began to appear over various parts of our islands and their neighbourhood. Heavy thunderstorms set in, accompanied by a considerable quantity of rain, after which the wind gradually shifted to the Northward, and by the 24th had become fine again. With bright weather and very little wind the thermometer again rose quickly, and on the 26th the maximum temperatures for the month were recorded at the Irish and Scotch observatories.

June 27th–29th.—The weather on these two days was fine generally, and very warm and dry. Pressure then gave way over Scandinavia, the wind backed slowly through N. to N.W., and on the 30th the weather began to break up again, the change commencing in the extreme N.W. and North of our islands.

SECTION II.

TABLE OF CYCLONIC SYSTEMS, APRIL, 1877.

NATURE OF CHARACTERISTICS OBSERVED.	No. XXV. April 10-11.	No. XXVI. April 13-14.	No. XXVII. April 17-22.
Form	Elongated (Major Axis lying from S.W. to N.E.), but irregular and varying.	Nearly circular	Nearly circular at first, then irregular.
Size	Small at first, then increasing considerably.	Small, increasing to moderate	Varying somewhat, but on the whole large.
Depth	Shallow to deep	Shallow to moderate	Shallow to moderate.
Where first Observed	Over our Western districts	Over England	Off the W. of Ireland.
Direction of Motion	Easterly and North-easterly	South-easterly at first, then Southerly	First Easterly, then stationary; then Northerly.
Rate of Motion	Rapid to moderate	Slow	Very slow.
Regions passed over by Steepest Gradients.	Our Southern districts, France, Holland, and Southern parts of the North Sea.	English Channel and England	France and the British Isles, gradients never steep.
Termination	Travelled away North-eastwards over Finland.	Travelled away to the S. of France. Apparently broke up on the 17th.	Travelled away over Northern Russia.
Time under Observation	About two days	About four days	In all about six days.
Accompanying Winds	Strong South-westerly to North-westerly in the South-western, Southern, and South-eastern districts; moderate North-westerly to North-easterly in the N.	At first fresh, Northerly and North-westerly in the W. and Southerly in the E., then strong Northerly all over the country.	At first Easterly over our Northern districts. South-westerly and Southerly in the S. The Easterly wind died out after 19th and the S.W. wind fell light. A strong Northerly breeze blew in Scotland on 21st as the system moved towards Norway.
" Weather	Changeable and showery; with snow or sleet after the wind had veered to N.W.	Very unsettled and squally, with showers of hail, snow, and sleet.	Very rainy at first, then showery, with thunderstorms over our Eastern counties on the 20th and 21st and snow in N. of Scotland; finer afterwards, but colder.
" Rainfall	General; heavy in regions passed over by the central part of the depression.	General, but not heavy	Heaviest and most general on 19th and 20th, more particularly over the South-western and Southern districts.
REMARKS	This depression was apparently secondary to a larger (but shallower) area of low pressure which lay over Northern Europe. As it drew near to Norway it grew much deeper, and broke up into two distinct (primary and secondary) systems, and finally disappeared over Northern Russia. At the time of its appearance an anticyclone (No. XIII.), which had been lying over us for some days, was moving away to the Southward over France.	This depression seems to have been formed over England early on the 13th, and, growing deeper, to have moved South-eastwards and Southwards till the night of the 14th. In its rear an arm of high pressure was formed and stretched over our Islands from an anticyclone, the centre of which lay over Northern Europe. At the time of its appearance pressure was highest (30·1+) off our South-west coasts, lowest (29·3) over Finland, and at 6 p.m., 12th, the isobars gave no indication of its appearance.	This depression moved so very slowly and in such varying directions that the unsettled weather which accompanied it was felt all over North-western Europe. On the 20th and 21st it appeared to be dispersing. It is evident that our area of observation is not large enough for the full examination of depressions like this. A subsidiary disturbance appeared over the S. of Norway on the 23rd and also moved North-eastwards and disappeared on 24th. At the time of the first appearance of this system pressure was highest over Russia whence a band of high readings extended right across our Islands.

TABLE OF CYCLONIC SYSTEMS, APRIL TO JUNE, 1876.

NATURE OF CHARACTERISTICS OBSERVED.	No. XXVIII. April 23-26.	No. XXIX. and XXIXA. April 27-May 4.	No. XXX. and XXXA. May 22-27.
Form	Apparently nearly circular	Nearly circular at first, then varying	Varying greatly. Somewhat oval at first; then becoming elongated and breaking into two distinct systems.
Size	Large	Moderate	Moderate
Depth	Shallow to moderate	Shallow	Shallow
Where first Observed	Off the W. of Ireland	Off the W. of Ireland	To the North-westward of our islands
Direction of Motion	About North-north-easterly	South-easterly, then Easterly, and then North-easterly.	South-easterly at first; but when broken the Eastern portion moved East-north-eastwards, while the Western part moved South-eastwards.
Rate of Motion	Very slow	Very slow	Slow
Regions passed over by Steepest Gradients.	British Islands and Channel. Gradients never steep.	British Isles and France	Western and Southern parts of the British Isles.
Termination	Apparently dispersed off our N.W. coasts.	Travelled away over Finland	Dispersed—the Eastern portion going over Northern Russia, the Western over Belgium.
Time under Observation	4 days	About 7 days	About 6 days
Accompanying Winds	South-easterly to South-westerly and Westerly; generally light to moderate, but fresh on 24th.	South-westerly to Westerly over the Southern districts at first; South-easterly to Easterly in the N.; North-easterly to Northerly winds becoming general after 30th.	Southerly to Easterly and Northerly breezes in the N., Westerly to North-westerly and Northerly winds in the S. of our islands. Strong North-easterly breezes (temporarily) in the E. on night of 24th.
„ Weather	Showery; local thunderstorms on 24th and 25th.	Showery, unsettled, and rather cold; but improving after April 30. Halos frequent.	Rainy and unsettled weather set in at our Northern stations as the depression advanced, and spread gradually over us with local thunderstorms. Aurora Borealis occasionally very bright.
„ Rainfall	Very general on 24th, at other times partial; not heavy at any time.	Heavy in N. and N.E., but not elsewhere. Clearance began first in W.	General, and at times heavy locally, where the thunderstorms occurred.
REMARKS	This depression appeared first on the Northern side of the anticyclonic system No. XV., and after reaching our N.W. coasts it developed a subsidiary disturbance, which spread South-eastwards as an arm over Scotland and down our N.E. coasts.	On April 28th depression XXIX. lay to the Westward of Ireland, and began to extend as an arm, or "trough," of low pressure Eastwards, and this spread over all the Northern parts of N. Germany, and the Southern parts of the Baltic. By the 29th a subsidiary "minimum" (XXIXA.) appeared near Reval. At 6 p.m. on 30th, the centre of XXIX. lay about Amiens, when it began to travel North-eastwards and was lost to observation on the 4th. Pressure, at the time of its first appearance, was high both over Northern Europe and the Spanish Peninsula, but gradients were slight. The movements of XXIXA. cannot be drawn on Map 2.	This depression advanced immediately in the rear of the anticyclone No. XVIII. As it progressed a subsidiary minimum (XXXA.) appeared in its rear, and moving South-eastward, reached the Netherlands by the 24th and then dispersed slowly. The movements of No. XXX. over the S. of Sweden were very irregular. At the time when the system first appeared the barometer was highest over Germany and the S. of France, but as the barometer rose in the rear of the disturbance the highest pressures were transferred to our Western districts.

TABLE OF CYCLONIC SYSTEMS, APRIL TO JUNE, 1876.

No. XXXI. June 3-4.	No. XXXII. June 5.	No. XXXIII. June 8-10.	No. XXXIV. June 17-18.
Apparently nearly circular at first, but varying later on.	Apparently nearly circular	Nearly oval at first; then varying	Apparently circular.
Moderate	Moderate	Moderate	Large.
Shallow	Moderate	Shallow	Moderate.
To the Westward of Scotland	Advancing towards our N.W. coasts from the South-westward.	Over the S. of France	To the North-westward of Ireland.
North-easterly	North-easterly at first, then Northerly	Northerly at first, then North-easterly	East-north-easterly and North-north-easterly.
Slow	Rapid	Slow	Moderate at first, but apparently rapid after 8 a.m. on 18th.
The Northern parts of our islands	Scotland, and W. and N. of Ireland	The N. of France, the S. of our islands, and Southern parts of North Sea.	The Northerly and North-westerly parts of the United Kingdom.
Travelled away to Northwards	Travelled away to Northwards	Dispersed	Travelled away to Northwards.
About 2 days	1 day	2 days	About 36 hours.
Southerly to Westerly and North-westerly; strong at times.	Southerly to Westerly; strong in the Northern and Western districts.	North-easterly to Northerly over our Islands; blowing strongly on 9th.	South-easterly to Southerly, veering to W. and N.W.; blowing strongly in the W. and N.W. districts.
Dull, changeable, and rainy	Squally and showery, then finer	Dull, cold, and showery	Cloudy and showery.
General; heavy in N.W. and N., slight in S.	Heaviest at our Western and Northern stations; none in the S.E.	Rain was heaviest over the North-eastern parts of Ireland and Scotland.	The fall was pretty general in our Islands, but slight.
This depression appeared as anti-cyclonic system No. XIX. passed off, and was followed very closely by cyclone No. XXXII. When first observed pressure was highest over Northern Europe, France, and the Peninsula; lowest to the North-westward of our islands. A shallow subsidiary disturbance was formed, temporarily, over Holland on the 3rd.	This depression also appeared during the prevalence of conditions similar to those which were observed at the time when depression No. XXXI. passed by our North-western coasts. It soon travelled away from our area, and was followed by a much shallower disturbance which broke up during the 8th.	This depression was apparently formed over the inland parts of the S. of France. It was never very energetic, and after reaching North Germany, became secondary to some other feeble disturbance which lay to the Southward of it.	This depression appeared while pressure was highest over the Bay of Biscay, France, and North Germany. The reason for the increased rapidity of its motion after the morning of the 18th is not evident. Anticyclonic system No. XX. then appeared.

TABLE OF ANTICYCLONIC SYSTEMS, APRIL–JUNE, 1876.

NATURE OF CHARACTERISTICS OBSERVED.	No. XIII. April 3-8.	No. XIV. April 15-16.	No. XV. April 22-27.	No. XVI. April 23-29.
Form	Varying; appearing in a band, which for a time united a high pressure area over the Atlantic to another over Russia.	An arm or ridge of high pressure extending Westwards from a large anticyclone whose centre lay apparently over Russia.	Uncertain; only small portion visible.	Very variable and irregular
Size	Small	Large	Apparently large	Large
Height	Small	Small (see Remarks below)	Apparently small or moderate. Value of maximum readings unknown.	Small to moderate. Maximum readings, 30·3+, on 27th.
Where first Observed	Over the British Isles and the North of France.	Over the British Isles	Over the Bay of Biscay and Spain.	Over N. Germany
Direction of Motion	Irregular till 8th; then Southerly.	No motion	None	Northerly, then stationary
Rate of Motion	Very slow	Stationary	None	Slow
Regions passed over	North-western Europe generally.	British Isles and North Sea	Bay of Biscay and Northern parts of the Peninsula.	Baltic and Russia
Termination	Passed to the Southward and dispersed.	Broke up on advance of cyclone No. XXVII.	Dispersed on 27th	Dispersed
Time under Observation	5 days	2 days	6 days	7 days
Accompanying Winds	Chiefly Westerly and South-westerly on the Northern side of the system, and North-easterly in the South.	Southerly and South-westerly at our Northern stations; Northerly and North-easterly over our Southern districts and France.	Westerly about the mouth of the Channel.	Chiefly Easterly
„ **Weather**	Showery at times in Scotland and Ireland, fine over England. Nights cold and foggy, days mild.	Fine over most of our islands, but dull and showery in the extreme N. and N.W.	Fine	Fair and cold
REMARKS	This anticyclone appeared first in a band of high pressure, which, between the 1st and 3rd, united a high pressure area over the Bay of Biscay with another over Northern Europe. After the 3rd the Northern high pressure area seems to have dispersed and from the 5th the main body of the anticyclone lay completely over England. Thence it spread to the Netherlands and N. of France, while the South-westerly wind spread completely over the United Kingdom.	This arm, or "ridge," was formed immediately in the rear of cyclonic system No. XXVI. The main system from which it extended continued over Russia till after the 19th, while various cyclonic systems appeared in our islands and their neighbourhood.	This anticyclone extended an arm in a North-easterly direction over France and the North Sea. On the evening of the 23rd, another anticyclonic system (No. XVI.) appeared over N. Germany, and was connected by this arm with the system now under notice. A third (small) system appeared off the W. of Norway on the 24th, and soon merged with No. XVI.	See notes to No. XV. beginning with "On the evening of the 23rd." On the 25th this system moved Northwards to Sweden, and finally to Finland and the Gulf of Bothnia, where it broke up.

TABLE OF ANTICYCLONIC SYSTEMS, APRIL–JUNE, 1876.

No. XVII. **April 30-May 6.**	No. XVIII. **May 6-21.**	No. XIX. **May 31-June 2.**	No. XX. **June 18-26.**
Varying greatly	Varying	Somewhat oval at first, then varying	Irregular.
Large	Large	Small	Large.
Small	Moderate to small	Small (maximum readings 30·2+)	Moderate; maximum readings ranging from 30·2+ on 18th to 30·5 in. on 21st.
Off our N.W. coasts	Off the W. of Norway	Off the W. of Ireland	Over France.
South-easterly	Irregular. Sometimes Easterly over Northern Europe, then Westerly again; and after the 18th, Southerly.	Easterly	North-easterly till 21st, then stationary till 22nd; afterwards moving Westwards.
Very slow	Very slow	Variable, but generally slow	Slow.
British Islands, Belgium, and N. of France.	Northern Europe, the British Isles, and France.	Ireland, England, and the N. of France	France, N. Germany, and the Baltic.
Dispersed on arrival of anticyclonic system No. XVIII.	Dispersed as it moved Southwards	Dispersed	Dispersed.
5 days	16 days	3 days	9 days.
Northerly at first; then Easterly in the south, Westerly in the north, and Northerly in the east.	Easterly and North-easterly over our islands, and South-westerly in extreme N.W. and N.; North-easterly afterwards; followed by South-westerly and Westerly as the centre moved Southwards.	Westerly and South-westerly over our Northern districts and North-easterly in the S. Calm over central districts.	Southerly and South-easterly in our islands till 22nd, when winds became very light and variable.
Cold; very fine generally, but slight showers over our Midland and Eastern counties on 2nd.	Fine and dry till 13th, then slightly showery in S.E. England; slightly showery in the north next day. Rain over France on 18th.	Fine generally and warm	Very fine and warm till after 20th, when thunder showers began to prevail in the N.W. and N., and gradually spread over us.
This anticyclone appeared immediately in the rear of cyclone No. XXIX. On the evening of the 5th it covered nearly the whole of N.W. Europe (see Chart, Plate 7), but during the night a new system (No. XVIII.) appeared off the W. of Norway, and growing rapidly soon absorbed the one now under discussion.	During the prevalence of this anticyclone the barometer occasionally fell decidedly over France and Germany causing rather strong Easterly winds over the Southern districts between the 7th and 10th, and producing a temporary spell of Northerly to North-westerly winds over the German Ocean between the 14th and 17th.	During June 1st a very small and shallow cyclonic system was formed close to the centre of the anticyclone described above, and this probably was the cause of its early dissipation. The larger anticyclone, which appeared over Russia on the 2nd, was an altogether independent system. There had apparently been an anticyclonic system lying to the South-westward of our islands from May 28th to 31st, but it was not sufficiently within our area for its Form, Height, &c. to be made out.	The appearance of thunderstorm disturbances over North-western Europe marked the break-up of this anticyclone; which was followed (after the 26th) by the appearance of another high pressure area whose centre lay to the westward of our islands. (See Note, p. 50.)

NOTES, to accompany the TABLE of ANTICYCLONIC SYSTEMS, APRIL to JUNE 1876.

June 3rd–8th.—During this period pressure was highest over Russia, and rather high over Germany, France, and the Bay of Biscay also. In all probability a second anticyclonic area lay over the Atlantic to the South-westward of our islands. Over the United Kingdom and North Sea, however, the conditions were cyclonic, the winds Southerly to Westerly, and the weather changeable and showery. (See cyclonic systems No. XXXI. and XXXII.) This anticyclone was broken up by Depression No. XXXIII.

June 11th–16th.—To the westward of the cyclonic system No. XXXIII. the Western portion of an anticyclonic system again appeared over England, France, and the Bay of Biscay, and uniform pressures remained with us for several days, accompanied by very fine weather over England, and very slight showers in Ireland and Scotland. On the 14th cyclonic disturbances passed in an Easterly direction across our islands, giving us unsettled, showery weather; but no well-formed depression of importance appeared till the 17th, when the cyclonic system No. XXXIV. appeared.

June 26th–30th.—Pressure during this time was comparatively uniform and rather high over our islands, the highest readings of all being apparently in an anticyclone whose centre lay to the Westward of Ireland. Shallow depressions appeared over Scandinavia and France towards the end of the month, producing thunder showers over the Continent, which, on the 29th and 30th, affected some of our Eastern stations also. In other respects the weather over the United Kingdom was very fine and warm during the last week in the month.

SECTION III.

REMARKS FOR APRIL 1876.

(*Tables A. to C.*, APRIL, *with Monthly Wind and Weather Charts.*)

The month of April commenced with a continuation of the variable winds noticed at the close of March, but after the 2nd the South-westerly to Westerly current of air became stronger and more regular for about three days. Calms and Southerly to South-easterly airs then prevailed till the 9th, when a Westerly breeze set in, which quickly veered to N.W. and N., and finally (on the 14th) to N.E. The 15th and 16th formed a transition period in which Southerly winds again began to appear. By the 17th South-easterly winds had again become general; by the 19th they had veered to S.W. in the South of England and to N.W. and N. in Ireland, and at these points they gradually lulled. After a period of light breezes from varying directions South-easterly winds again began to prevail in the North, while South-westerly to Westerly winds were felt at our Southern stations, and these two currents retained their relative positions with little change until the 28th. The South-easterly wind then obtained the mastery, and backing round gradually it became Easterly by the 29th. At the end of the month North-easterly breezes were blowing all over the country. Thus the winds for the month were exceedingly variable, and while those from S. to S.W. were the most prevalent in our South-western and Southern districts, the Easterly and North-easterly currents were very largely mingled with them in the North, and, in fact, formed the prevailing winds of the month at Sumburgh Head.

Pressure.—The mean pressure of the atmosphere at 8 a.m. ranged from about 29·88 inches along our South coast to about 29·80 inches in the N.W. of Ireland, and to 29·75 inches in the Shetlands. The lowest readings recorded were experienced with the cyclonic system (No. XXVII.) which passed over our islands between the 18th and 20th, while the highest were recorded during the prevalence of the anticyclone whose centre passed over us on the 5th and 6th. The range was not very great anywhere, but varied from about 1·7 inches in Cornwall to 1·45 inches at Aberdeen.

Movements of Depressions.—The depressions observed were few in number and (excepting No. XXV.) were not very deep; two of them passed over us in a South-easterly direction, and three North-easterly, and in all cases their centres passed well over the kingdom.

The anticyclonic areas were well formed, and that of the 1st to 8th lay over our islands for several days, while the remainder lay chiefly over the other parts of Western Europe.

Temperature.—The mean temperature (at the sea level) ranged from a little above 49° in the neighbourhood of London and over the Western part of the Channel to about 42° over the Southern part of the Shetlands. Areas of relative cold were observed over the West of Scotland, North Wales, and along the extreme Southern parts of our Southern counties, but over the home counties and the South Midlands the relatively high inland temperatures of the summer half of the year had already begun to appear, so that the mean temperature of London was as high as that of the Scilly Islands. The maximum readings registered occurred in most places on the 7th or 8th; but at some of our Western districts the highest were registered on the 4th, more especially at stations in the E. of Ireland and S.W. of England, those recorded over the Eastern and Central parts of England (70° to 73°) were high for the time of year.

Of the minima the lowest were registered very generally on the 13th or 14th, but in some parts of our North-western districts the sharpest cold occurred early on the 2nd. The range of temperature was as much as 46° at Hillington, 38° at Kew, 36° at Stonyhurst, and 35° at Glasgow, but was only 25° or 26° at Falmouth and Valencia.

Vapour Tension was lowest (0·23 inches) at the Scotch stations and highest (0·29 inches) along our S. and S.W. coasts; but the *Relative Humidity* was greatest in the S. and S.E.

Rainfall (omitting that at the high-level stations) was in excess of the mean except at a few points in the extreme North-west. The smallest amounts registered were recorded over our South-eastern counties, and the largest in the S. of Ireland and S.E. of England, but the amounts in all districts were less than those for March.

TABLE A., APRIL.—SHOWING the MEAN and EXTREME PRESSURES and TEMPERATURES recorded at each of the SEVEN SELF-RECORDING OBSERVATORIES of the METEOROLOGICAL OFFICE during the Month of April 1876; together with the EXTREME RANGE of each, the MONTHLY VAPOUR TENSION, the RELATIVE HUMIDITY, and TOTAL RAINFALL.

NAMES OF OBSERVATORIES.	PRESSURE at 32° F. and the Mean Sea Level.						TEMPERATURE in the Shade.						HYGROMETRIC VALUES.		RAINFALL.
	Mean for the Month.	Extremes.				Range.	Mean for the Month.	Extremes.				Range.	Tension of Vapour.	Relative Humidity (Saturation=100).	
		Minimum.		Maximum.				Minimum.		Maximum.					
		Reading.	Date.	Reading.	Date.			Reading.	Date.	Reading.	Date.				
	ins.	ins.	D. H.	ins.	D. H.	ins.	°	°	D. H.	°	D. H.	°	in.	%	
Valencia	29·814	28·884	18th, 5 a.m.	30·457	5th, 1 p.m. & 9 p.m.	1·753	48·5	33·3	11th, 11 p.m.	59·5	7th, 1 p.m.	26·2	·283	84	4·001
Armagh	·830	·971	19th, 5 p.m.	·469	6th, 10 a.m.	1·498	45·4	28·4	13th, 6 a.m.	59·9	4th, 5 p.m.	31·5	·247	82	1·760
Glasgow	·808	·940	19th, 4 p.m.	·426	6th, 10 a.m.	1·486	44·2	26·3	13th, 6 a.m.	60·9	8th, 1 p.m.	34·6	·226	77	2·040
Aberdeen	·823	·980	20th, 5 a.m.	·428	6th, 10 a.m.	1·448	42·8	26·6	13th, 5 a.m.	60·3	8th, 1 p.m.	33·7	·227	83	2·690
Falmouth	·880	·839	19th, 2 a.m.	·567	5th, 10 a.m.	1·728	47·9	33·7	13th, 10 p.m.	59·3	4th, 2 p.m.	25·6	·282	86	3·725
Stonyhurst	·837	·878	19th, 1 p.m.	·472	5th, 10 a.m.	1·594	45·4	29·4	2nd, 6 a.m.	65·8	8th, 2 p.m.	36·4	·240	80	2·629
Kew	29·870*	28·912	19th, 9 a.m.	30·520	5th, 10 a.m.	1·608	47·8	32·2	13th, 7 p.m. & 14th, 0.20 a.m.	70·4†	8th, ?	38·2	·255	77	2·069

* Mean for one day is approximate.

† Corrected reading of Phillip's Maximum Thermometer, obtained from Weather Sheet.

TABLE B., April.—Giving a Summary of the Meteorological Observations made at Stations

The values are not

(The Stations are grouped into Districts, and then arranged in order of Latitude,

Names of Districts.	Names of Stations.	Mean Height of Barometer (at 32° Fahrenheit, and Mean Sea Level) from observations made at 9 a.m. and 9 p.m.	Air Temperature.									
						Means of			Absolute Extremes.			
			At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.
		ins.	°	°	°	°	°	°	°		°	
0. SCOTLAND, N.	Sandwick Manse	29·802	42·6	40·4	41·5	38·3	46·5	42·4	25·6	13th	55·0	3rd
1. SCOTLAND, E.	Glenalmond	29·839	42·4	40·4	41·4	35·2	48·8	42·0	21·5	13th	62·0	6th
2. ENGLAND, N.E.	Seaham	29·831	47·1	43·6	45·4	39·1	51·6	45·4	27·8	13th	67·2	8th
	Durham	29·823	47·0	41·9	44·5	37·2	52·7	45·0	26·2	13th	66·8	8th
	Hull	29·857	47·2	44·4	45·8	39·3	53·8	46·6	29·0	16th	68·0	8th
	Kelstern (Calcethorpe)	29·859	45·6	42·1	43·9	37·9	52·2	45·1	23·6	13th	66·4	8th
3. ENGLAND, E.	Hillington	29·843	48·3	43·6	46·0	37·8	55·2	46·5	23·8	13th	70·0	8th
	Audley End	29·880	49·2	43·9	46·6	38·0	55·5	46·8	30·0	13th, 14th	70·2	8th
	Chigwell Row	29·905	48·5	45·2	46·9	40·3	54·6	47·5	29·8	13th	68·0	8th
4. MIDLAND COUNTIES.	Buxton	29·861	45·0	41·7	43·4	36·4	50·6	43·5	26·0	12th	64·9	8th
	Cheadle	29·854	44·2	43·4	43·8	37·7	52·0	44·9	24·4	12th	65·1	8th
	Leicester	29·855	47·3	46·1	46·7	39·0	54·2	46·6	27·7	12th	68·0	8th
	Churchstoke	29·876	46·8	43·4	45·1	36·2	53·3	44·8	25·0	15th	65·1	7th
	Oscott	29·859	45·4	44·3	44·9	39·0	54·4	46·7	27·2	12th	68·8	8th
	Uppingham	29·848	46·0	42·8	44·4	38·3	53·9	46·1	27·5	12th	67·7	8th
	Hereford	29·866	47·5	44·6	46·1	39·2	54·8	47·0	29·3	12th	63·8	7th
5. ENGLAND, S.	Marlborough	29·881	46·9	43·9	45·4	39·5	54·6	47·1	28·7	12th	65·9	8th
	Strathfield Turgiss	29·884	48·8	44·8	46·8	39·0	55·6	47·3	29·6	2nd	68·9	8th
	Hastings	29·887	47·6	45·1	46·4	41·6	52·7	47·2	29·4	13th	62·6	8th
	Ramsgate	29·891	49·0	46·2	47·6	42·3	53·9	48·1	29·5	12th	61·6	8th
	Folkestone	29·872	47·5	44·8	46·2	41·3	53·1	47·2	28·3	13th	65·1	8th
6. SCOTLAND, W.	—	—	—	—	—	—	—	—	—	—	—	—
7. ENGLAND, N.W.	Hawes	29·860	43·6	41·1	42·4	35·9	49·7	42·8	25·1	13th	65·0	8th
	Llandudno	29·836	49·3	44·9	47·1	41·0	55·2	48·1	31·9	13th	65·3	4th
8. ENGLAND, S.W.	Caermarthen	29·838	48·7	44·5	46·6	40·4	54·8	47·6	31·1	13th	63·9	7th
	Dartmoor	29·965	43·7	40·8	42·3	37·0	47·6	42·3	26·4	12th	57·8	8th
9. IRELAND, N.	Markree	29·805	46·8	44·1	45·5	39·4	53·5	46·5	24·7	13th	60·9	7th
10. IRELAND, S.	Dublin	29·844	47·0	45·8	46·4	41·7	53·0	47·4	25 4	13th	63·7	4th
	Parsonstown	29·832	47·4	44·7	46·1	40·1	54·5	47·3	27·6	13th	65·4	4th
CHANNEL	Jersey (St. Aubin's)	29·935	50·6	46·8	48·7	43·4	54·5	49·0	32·2	13th, 14th	61·0	6th, 7th

* This amount includes

of the SECOND ORDER in the BRITISH ISLANDS, during the Month of April, 1876.
corrected for Diurnal Range.
beginning in each case with the Station lying furthest to the Northward.)

TENSION OF VAPOUR.			RELATIVE HUMIDITY.			AMOUNT OF CLOUD (0 to 10).			RAINFALL.			WEATHER, No. of Days of							WIND, No. of Observations of								
At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
ins.	ins.	ins.	%	%	%				ins.	ins.																	
·235	·228	·232	87	91	89	7·3	7·0	7·2	2·230	0·400	8th	19	7	1	1	2	15	3	8	6	7	9	6	7	5	9	3
—	—	—	—	—	—	6·9	7·0	7·0	4·030	1·370	27th	16	4	2	0	3	13	1	2	7	14	2	5	10	6	5	5
·272	·259	·266	84	91	88	6·0	6·4	6·2	2·860	0·590	10th	20	4	6	3	3	12	0	1	9	8	7	8	9	8	2	8
·258	·245	·252	80	92	86	7·7	6·1	6·9	3·226	0·573	28th	19	5	3	1	2	13	0	3	9	7	5	13	9	5	8	1
·278	·257	·268	86	88	87	7·4	4·2	5·8	2·050	0·420	10th	18	1	0	0	5	11	0	2	10	4	9	4	13	6	11	1
·268	·246	·257	87	90	89	7·1	5·2	6·2	3·595	0·468	24th	19	4	2	3	5	11	1	3	7	10	8	7	13	5	5	2
·285	·258	·271	84	91	88	7·3	5·5	6·4	4·675	2·080*	13th	17	5	1	4	5	12	2	1	10	3	12	6	10	7	8	3
·272	·249	·260	77	87	82	6·2	5·6	5·9	2·720	0·410	10th, 13th, 29th.	18	3	3	3	5	9	0	1	9	0	12	4	16	0	11	7
·268	·249	·259	79	83	81	7·6	5·1	6·4	1·750	0·530	13th	8	4	1	2	1	8	0	5	5	10	7	14	12	5	0	2
·251	·234	·243	84	86	85	7·8	6·5	7·2	4·260	1·010	10th	19	5	2	2	0	13	0	10	4	6	11	2	9	12	4	2
·251	·249	·250	87	89	88	7·4	6·3	6·9	4·070	0·870	12th	20	5	1	5	3	12	0	5	6	5	3	8	3	8	6	16
·254	·245	·250	78	79	79	8·0	5·3	6·7	2·770	0·600	12th	19	4	0	1	3	13	0	7	2	7	4	6	12	9	3	10
·261	·240	·251	81	84	83	5·7	5·8	5·8	2·192	0·450	12th	22	5	1	2	3	7	2	2	2	6	12	2	9	6	14	7
·268	·251	·260	87	85	86	8·6	6·1	7·4	2·580	0·620	29th	18	4	3	0	2	17	0	6	7	8	5	11	11	5	5	2
·266	·249	·258	86	91	89	7·6	5·8	6·7	3·571	0·601	12th	18	3	1	0	2	11	1	7	9	1	7	10	14	4	7	1
·264	·248	·256	79	83	81	6·3	5·2	5·8	2·470	0·630	29th	17	2	2	0	5	8	0	7	4	7	1	11	5	5	4	16
·273	·261	·267	85	91	88	7·4	4·6	6·0	3·413	0·653	20th	19	4	1	1	5	12	0	4	3	2	1	3	5	9	3	30
·283	·265	·274	81	88	85	6·5	5·2	5·9	1·996	0·445	10th	15	4	0	1	5	10	0	3	10	3	5	5	13	6	10	5
·279	·271	·275	84	89	87	6·0	3·9	5·0	1·905	0·385	18th	17	4	3	1	9	8	2	2	13	2	6	11	13	8	4	1
·287	·277	·282	82	88	85	6·6	4·8	5·7	1·570	0·435	18th	9	3	0	0	4	9	2	6	6	6	1	6	18	8	0	9
·290	·280	·285	88	95	92	5·8	4·1	5·0	1·360	0·300	13th	11	3	2	1	6	6	0	4	9	5	3	8	11	5	4	11
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
·241	·231	·236	84	87	86	8·3	6·0	7·2	2·960	0·550	10th	23	6	3	0	3	14	0	1	5	9	6	3	8	9	7	12
·266	·252	·259	76	85	81	6·3	5·3	5·8	3·075	0·825	9th	12	4	2	0	5	11	1	6	7	7	3	7	4	19	6	1
·288	·269	·279	83	90	87	7·4	5·1	6·3	3·600	0·720	9th	19	3	3	1	5	12	0	5	0	5	6	7	11	7	4	15
·258	·242	·250	90	92	91	7·5	5·7	6·6	6·980	1·230	17th	22	4	2	0	5	13	5	5	3	6	4	3	15	8	8	8
·271	·260	·266	84	88	86	7·3	7·0	7·2	2·836	0·628	9th	24	4	5	0	2	15	0	6	8	7	12	15	6	1	2	3
·258	·265	·262	80	86	83	6·9	6·3	6·6	2·601	0·469	9th	17	4	8	2	2	12	0	4	5	8	8	6	8	12	6	3
·273	·266	·270	82	88	85	7·7	7·3	7·5	2·063	0·517	27th	15	3	1	0	0	14	0	4	5	4	13	9	6	9	4	6
·292	·281	·287	79	87	83	6·1	4·9	5·5	2·386	0·470	13th	18	2	5	0	6	11	0	3	10	2	2	8	16	4	11	4

the rainfall for the 12th.

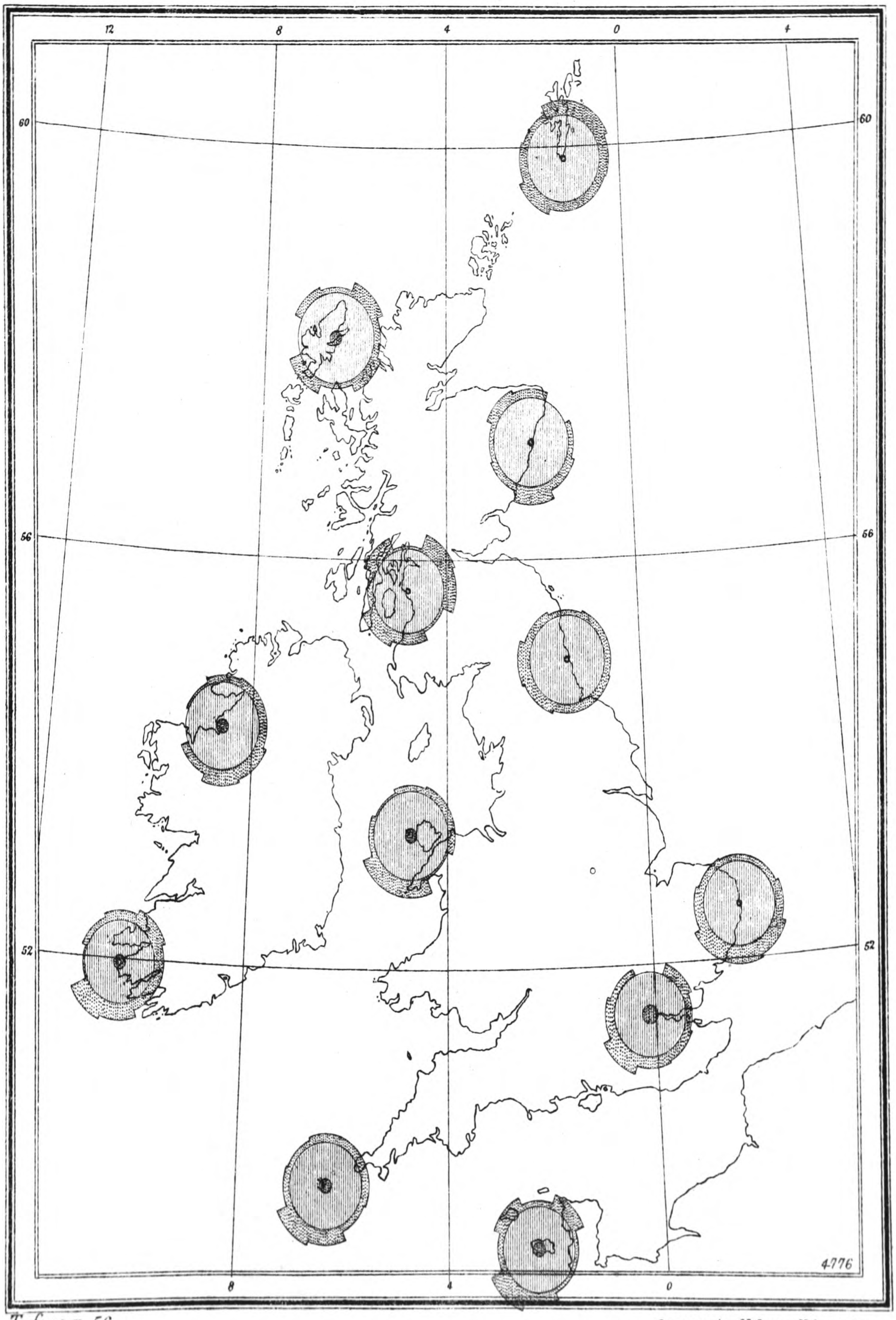
TABLE C., APRIL.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC REPORTING STATIONS in the BRITISH ISLANDS, during the month of April, 1876. Observations made at 8 a.m. daily.

The Stations are grouped in Districts, and then arranged in order of Latitude, beginning in each case with the Station lying furthest North.

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit, and Mean Sea Level) from Observations made at 8 a.m.	AIR TEMPERATURE.								TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.			WEATHER, No. of Days of							WIND, No. of Observations of								
				Means of			Absolute Extremes.																									
			At 8 a.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date				Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
		ins.	°	°	°	°	°		°		ins.	%		ins.	ins.																	
0. SCOTLAND, N.	Sumburgh Head	29·756	42·0	37·3	46·0	41·7	25	13th	51	4th, 7th	·231	87	7·6	1·41	0·27	22nd	21	2	0	0	4	15	1	5	5	4	3	3	5	3	2	0
	Stornoway	29·781	42·4	36·8	47·1	42·0	23	14th	55	5th, 6th,	·241	89	6·7	3·90	0·74	12th	27	1	0	0	6	15	6	2	6	3	5	2	6	0	4	2
	Thurso	29·790	42·6	37·6	48·8	43·2	25	13th	59	5th	·232	85	7·5	3·93	0·83	8th	24	2	0	0	2	13	1	6	4	4	3	7	2	0	3	1
	Wick	29·794	42·0	37·2	48·1	42·7	28	12th, 13th	61	5th	·231	87	6·7	2·76	0·87	8th	17	2	0	0	6	14	1	3	1	0	9	5	1	1	9	1
1. SCOTLAND, E.	Nairn	29·806	42·8	38·3	49·8	44·1	28	13th	62	8th	·232	85	5·4	1·79	0·47	20th	18	1	0	0	9	9	1	1	2	3	3	0	4	1	3	0
	Aberdeen	29·801	43·4	38·8	48·7	43·8	26	13th	62	8th	·228	80	5·5	2·72	0·49	18th	13	3	1	1	8	6	4	4	1	2	4	8	3	2	5	1
	Leith	29·825	44·5	38·7	53·6	46·2	27	13th	67	8th	·253	87	6·8	2·94	0·85	27th	14	2	2	0	4	13	0	2	2	5	3	1	4	8	4	1
2. ENGLAND, N.E.	Shields	29·832	44·0	39·6	50·3	45·0	28	13th	64	7th	·246	85	7·0	3·01	1·02	28th	18	3	2	1	5	13	4	2	3	3	4	4	5	6	3	0
	Scarborough	29·844	46·8	41·1	50·3	45·7	29	13th	63	4th	·264	83	6·6	2·72	0·85	10th	16	2	3	1	5	9	0	4	2	3	5	3	7	5	1	0
	York	29·844	44·4	38·3	54·4	46·4	25	14th	68	8th	·267	91	6·6	2·07	0·59	10th	17	3	0	0	6	16	0	2	3	3	2	11	2	4	3	0
3. ENGLAND, E.	Yarmouth	29·872	45·1	40·8	50·3	45·6	30	12th, 13th	60	9th	·274	91	5·7	2·32	0·55	13th	17	2	3	1	11	10	1	2	2	3	5	6	6	4	2	0
	Cambridge	29·859	46·6	38·5	57·7	48·1	28	13th	71	8th	·278	88	6·7	2·22	0·42	13th	18	2	1	1	8	16	0	3	3	2	5	4	8	3	2	0
4. MIDLAND COUNTIES.	Nottingham	29·855	45·4	39·1	56·4	47·8	26	11th	70	8th	·271	90	7·5	2·96	0·69	12th	20	3	0	0	8	21	1	5	2	1	5	6	6	1	2	2
	Oxford	29·851	45·5	40·7	55·4	48·1	31	2nd	67	8th	·270	89	7·1	2·90	0·70	20th	21	2	0	0	6	15	0	1	2	2	3	3	6	7	1	5
5. ENGLAND, S.	London	29·865	48·0	41·2	57·6	49·4	30	12th, 13th	73	8th	·274	83	6·8	1·69	0·35	19th	13	2	0	0	7	14	1	0	4	2	3	4	8	4	2	3
	Dover	29·872	47·5	42·8	51·6	47·2	32	12th, 13th	58	6th	·271	84	4·2	1·23	0·54	10th	11	2	1	0	12	1	0	1	5	1	1	4	12	4	2	0
	Hurst Castle	29·850	46·1	41·8	51·2	46·5	31	12th, 14th	59	7th	·293	94	5·8	1·87	0·46	10th	17	1	0	0	8	11	2	2	3	3	1	3	7	4	4	3
6. SCOTLAND, W.	Ardrossan	29·820	44·6	40·3	51·3	45·8	28	13th	57	7th, 8th, 16th.	·235	79	7·3	2·02	0·47	27th	16	0	0	0	4	16	1	1	6	5	1	4	6	2	5	0
7. ENGLAND, N.W.	Liverpool	29·821	45·1	40·8	53·0	46·9	32	2nd, 11th 12th, 13th.	66	8th	·246	82	6·8	2·38	0·48	27th	16	0	0	0	7	15	2	1	2	5	9	2	2	7	2	0
	Holyhead	29·823	45·3	42·0	52·1	47·1	34	13th	60	7th	·270	89	7·0	1·99	0·36	12th	19	8	2	0	4	11	2	2	3	3	1	8	8	2	1	2
8. ENGLAND, S.W.	Pembroke	29·834	45·4	42·3	50·9	46·6	31	14th	58	6th, 7th	·276	91	6·6	1·52	0·25	27th	17	0	0	0	4	13	4	3	3	4	4	5	5	2	3	1
	Portishead	29·846	45·7	39·9	55·6	47·8	31	11th, 12th, 14th.	68	8th	·272	89	7·1	2·38	0·53	10th	15	0	1	0	3	12	3	3	1	4	2	3	8	6	3	0
	Plymouth	29·862	47·4	42·2	54·3	48·3	33	1st, 3rd, 12th, 14th.	59	6th	·295	91	6·2	3·81	0·74	20th	20	1	1	0	10	15	1	1	3	2	5	3	5	1	7	3
9. IRELAND, N.	Greencastle	29·774	45·0	37·8	51·6	44·7	26	13th	62	6th	·251	84	7·3	2·62	0·45	27th, 28th	19	1	0	0	6	19	0	4	4	4	3	6	4	3	2	0
	Donaghadee	29·811	44·7	40·3	50·5	45·4	30	12th	60	4th	·261	88	6·7	2·00	0·36	28th	17	0	0	0	8	16	0	0	2	3	4	6	6	4	2	0
10. IRELAND, S.	Kingstown	29·833	45·2	42·2	50·7	46·5	28	13th	62	4th	·253	85	6·8	1·74	0·37	12th	17	0	2	1	4	11	1	1	2	1	9	5	1	6	5	0
	Roche's Point	29·826	47·3	43·2	53·0	48·1	33	12th	58	6th	·285	88	6·2	3·82	0·57	3rd	19	3	1	0	7	11	1	4	3	0	7	7	3	2	4	0
	Valencia	29·817	48·3	43·0	53·3	48·2	32	12th	59	7th	·272	81	6·7	4·46	0·55	17th	22	0	1	0	7	13	2	3	5	3	2	5	7	1	2	2
—	Scilly*	29·900	49·2	44·8	52·5	48·7	32	14th	57	4th	·308	89	8·1	2·43	0·66	17th	?	0	0	0	0	13	3	3	3	3	2	5	8	2	2	2

* Owing to illness of Observer most of these values are for 28 days only. The total fall of rain and the wind observations are, however, those for the entire month.

MONTHLY WIND CHART—APRIL 1876.

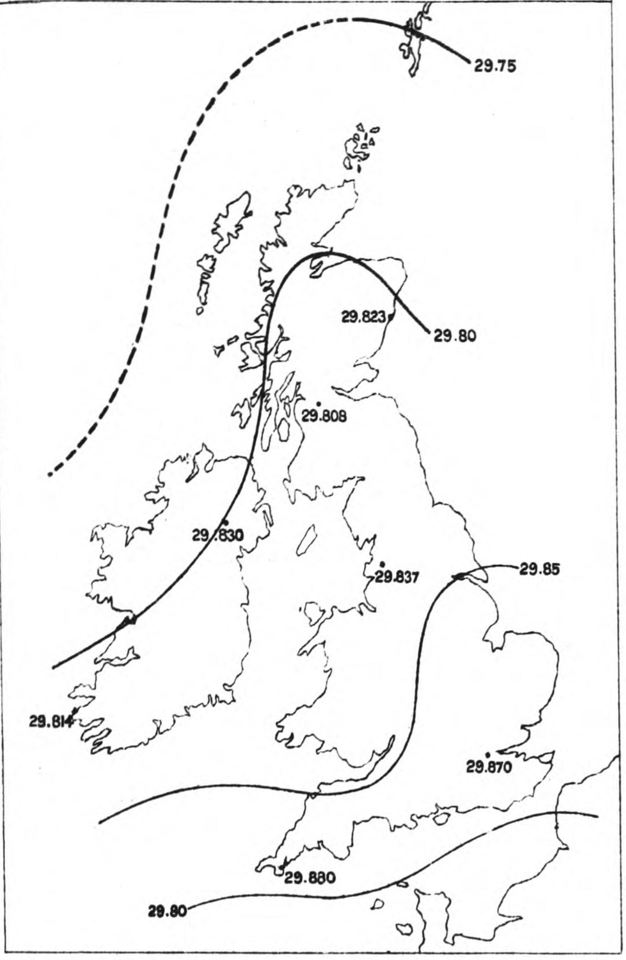

12
8
4
0
4
60
60
56
56
52
52
8
4
0
4776

To face p. 56.

DANGERFIELD LITH. 22. BEDFORD S^T COVENT GARDEN.

MONTHLY WEATHER CHART—APRIL 1876.

1. DISTRIBUTION OF MEAN PRESSURE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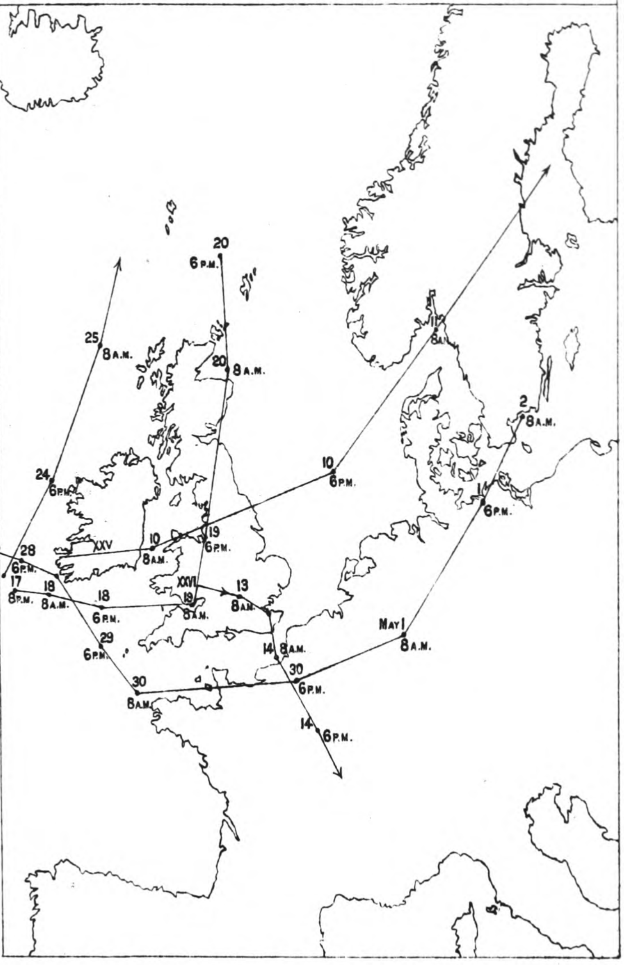
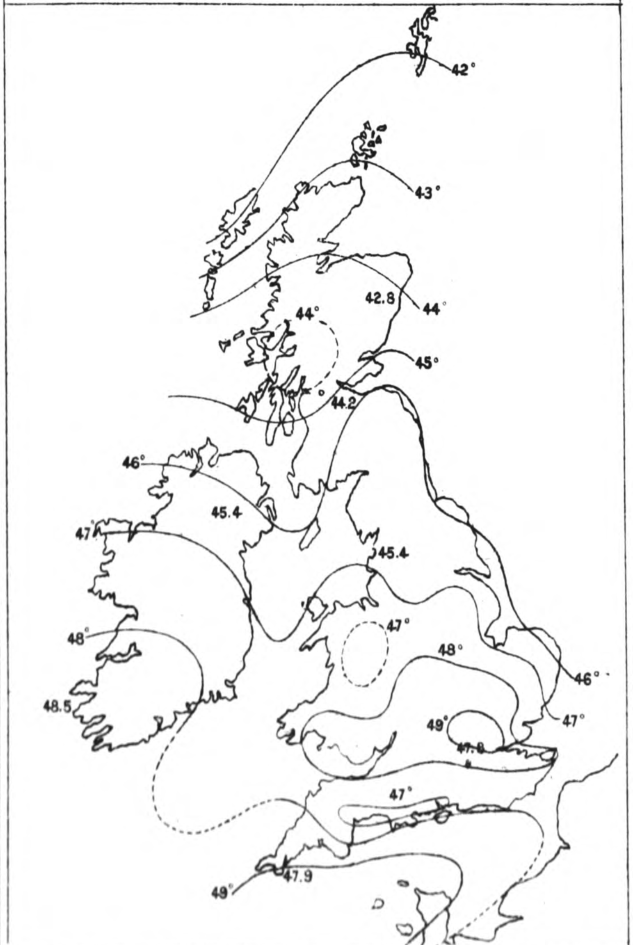
29.80
29.808
29.830
29.837
29.85
29.814
29.870
29.880
29.80

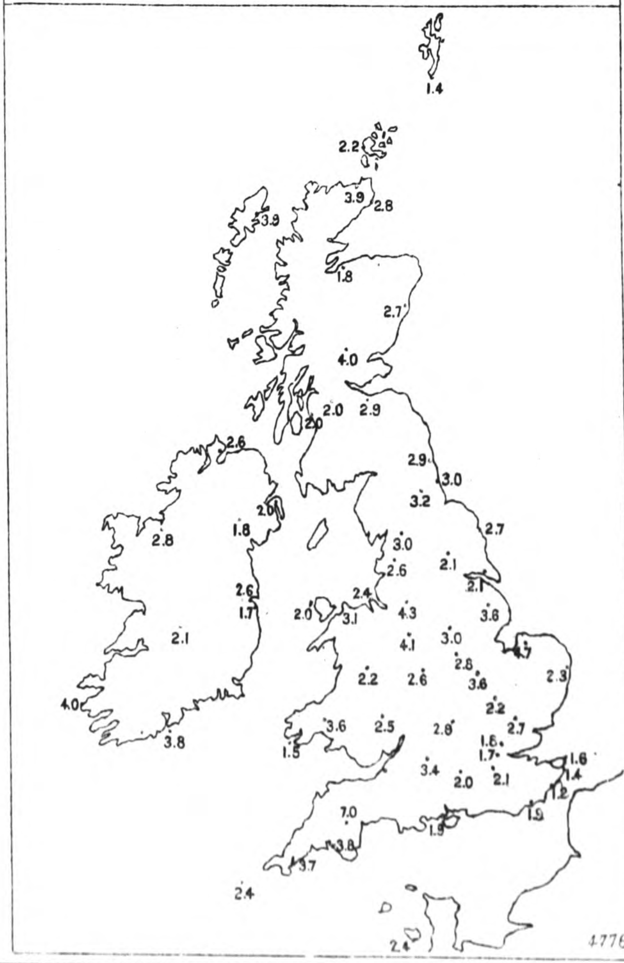
2. MOVEMENTS OF DEPRESSIONS.


20
6 P.M.
25
8 A.M.
20
8 A.M.
11
8 A.M.
2
8 A.M.
24
6 P.M.
10
6 P.M.
1
6 P.M.
XXIX
28
6 P.M.
XXV
10
8 A.M.
19
6 P.M.
XXVIII
17
XXVII
8 P.M.
18
8 A.M.
18
6 P.M.
XXVI
19
8 A.M.
13
8 A.M.
May 1
8 A.M.
29
6 P.M.
14
8 A.M.
30
6 P.M.
30
8 A.M.
14
6 P.M.

3. DISTRIBUTION OF MEAN TEMPERATURE.


42°
43°
42.8
44°
44°
45°
44.2
46°
45.4
47°
45.4
47°
48°
48°
46°
48.5
49°
47°
47.8
47°
49°
47.9
48°

4. RAINFALL


1.4
2.2
3.9
2.8
3.9
1.8
2.7
4.0
2.0
2.9
2.0
2.6
2.9
3.0
3.2
2.0
2.8
1.8
2.7
3.0
2.1
2.6
2.1
2.6
2.4
1.7
2.0
3.1
4.3
3.6
2.1
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4.1
4.7
2.8
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4.0
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2.8
2.7
3.8
1.5
1.6
1.7
1.6
3.4
2.0
2.1
1.4
1.2
7.0
1.9
1.9
3.8
3.7
2.4
2.4
4776

To follow Wind Chart for April.

Dangerfield Lith 22 Bedford St Covent Garden

REMARKS FOR MAY 1876.

(*Tables A. to C.*, MAY, *with Monthly Wind and Weather Charts.*)

Wind.—The month commenced with cold Northerly winds, which lulled gradually, until, on the 2nd, anticyclonic airs and calms prevailed very generally. The Easterly and North-easterly airs in the S., however, subsequently became more pronounced and spread gradually over the kingdom. After a temporary backing of wind to the Northward on the 14th and 15th, the wind returned to N.E., and it was not until the 19th that Westerly breezes began to appear even at our Northern stations. These latter backed to S.W., and then spread gradually Southwards and Eastwards, so that by the 22nd South-westerly breezes were general. As the depression (No. XXX.), which produced them, travelled over us, the wind again veered to the Northward, which quarter it reached in Ireland on the 23rd and in England on the 24th. On the 26th the wind was backing again slowly; by the 28th it had become Westerly at our Northern stations, and North-westerly elsewhere, and from this date till the close of the month very little change in direction was reported. Thus it is evident that the prevailing winds were North-easterly over the Southern half of the British Isles, and Northerly on our N.E. coasts; but that over the most Northern districts there was more wind from the Westward and North-westward than from other points; even there, however, the percentage of North-easterly wind was considerable. The force of the wind was, on the whole, slight; the gales were very few in number, and of only moderate strength.

Pressure was very much higher and steadier than in either of the preceding months of this year. The mean (8 a.m.) readings varied from a little above 30·2 inches over the Southern half of Ireland to 30·1 inches over the Orkneys, the central region of the North Sea, and the N. of France. The highest readings were recorded on the 8th or 9th over all our Northern districts, but on the 4th in the South and South-west, while the lowest (none of which were below 29·53 inches) were registered during the depressions (Nos. XXX. and XXXA.) which passed over us between the 22nd and 27th. The range was small, the only observatory at which it exceeded an inch being Aberdeen.

Movements of Depression.—The only depression of importance which travelled over our islands during the month reached our N.W. coasts early on the 22nd, and, passing in about a South-easterly direction, broke into two distinct portions, one of which turned North-eastwards and travelled towards Northern Europe, while the other moved South-eastwards to Belgium, where it dispersed. *Anticyclonic* conditions were almost continuously present with us during the month, and the central portion of the system which prevailed during the first few days lay completely over the British Isles.

Temperature was irregularly distributed for the season. It ranged (at the sea level) from a little above 53° in the S.E. of Ireland, and about 52° over Devonshire, to about 50° on our N.W. coasts, to 40° along our North-eastern and Eastern coasts, to 48° in the N. of Scotland, and to 46° in the S. of the Shetlands. A small area of relative cold lay over Shropshire, and another (much less clearly marked) over the S.W. of Scotland; while Devon and Cornwall and the S.E. of Ireland were relatively warm. Compared with Mr. Buchan's chart of mean temperatures for the corresponding month in the 13 years 1857 to 1869, the values for the present month indicate a deficit of about 3° in England, and 2° in the N. of Ireland, but little or no deficiency elsewhere. The air was, however, of a very dry character, and the steady persistence of drought had in some cases a serious effect.

The highest readings during the month were recorded on the 6th or 7th at our Northern and most Western stations, but on the 21st at Falmouth, and the 29th or 30th over our Eastern and North-eastern districts. These readings were as high as 69° to 70° at some of our inland stations, and ranged from 62° to 66° in other districts. The minima were recorded on the 1st or 2nd over all the Western and North-western districts, but on the 3rd at Stonyhurst and in the N.E. of England and on the 5th in the S.E.; they ranged from 39° at Falmouth, and 38° at some other of our South-western coast stations to 19° at Buxton, 24° at Wick, and 26° at Hawes Junction. The range for the month was as large as 42° over some of the inland parts of our Southern counties, and was 37° at Kew, but was only 25° at Falmouth and in the Orkneys.

Vapour Tension was highest at the coast stations, and especially at those in the E., S., and S.W., while it was lowest over the inland parts of England. For relative humidity, however, the highest values were noticed at the Northern and Eastern coast stations.

Rainfall.—This was very slight everywhere, but especially so at the stations on our W. and S.W. coasts, where the total fall for the month amounted to only a few tenths of an inch.

TABLE A., MAY.—SHOWING the MEAN and EXTREME PRESSURES and TEMPERATURES recorded at each of the SEVEN SELF-RECORDING OBSERVATORIES of the METEOROLOGICAL OFFICE during the Month of May, 1876; together with the EXTREME RANGE of each, the MONTHLY VAPOUR TENSION, the RELATIVE HUMIDITY, and TOTAL RAINFALL.

NAMES OF OBSERVATORIES.	PRESSURE at 32° F. and the Mean Sea Level.						TEMPERATURE In the Shade.						HYGROMETRIC VALUES.		RAINFALL.
	Mean for the Month.	Extremes.				Range.	Mean for the Month.	Extremes.				Range.	Tension of Vapour.	Relative Humidity (Saturation = 100).	
		Minimum.		Maximum.				Minimum.		Maximum.					
		Reading.	Date.	Reading.	Date.			Reading.	Date.	Reading.	Date.				
	ins.	ins.	D. H.	ins.	D. H.	ins.	°	°	D. H.	°	D. H.	°	in.	%	ins.
Valencia	30·200	29·712	24th, 4 a.m.	30·437	4th, 1 a.m.	·725	51·9	38·2	2nd, 5 a.m.	66·1	7th, 4 p.m.	27·9	·284	74	0·702
Armagh	·206	·603	22nd, Noon	·506	9th, 9 a.m.	·903	50·0	32·7	2nd, 5 a.m.	62·9	6th, 3 p.m.	30·2	·263	73	0·480
Glasgow	·156*	·537	22nd, 5 p.m.	·536	9th, 7 a.m.	·999	49·7	32·8	2nd, 5 a.m.	63·8	6th, 4 p.m.	31·0	·246	69	0·570
Aberdeen	·159	·536	23rd, 4 a.m.	·590	9th, 10 a.m.	1·054	47·7	33·6	1st, 4 a.m.	66·8	29th, 3 p.m.	33·2	·250	76	0·610
Falmouth	·164	·709	24th, 6 a.m.	·494	4th, 9 a.m.	·785	50·8	39·4	2nd, 5 a.m.	64·0	21st, 1 p.m.	24·6	·270	73	0·130
Stonyhurst	·171	·589	22nd, 5 p.m.	·525	8th, Midt.	·936	48·8	31·9	3rd, 5 a.m.	65·9	6th, 3 p.m.	34·0	·249	72	0·617
Kew	30·140	29·677	24th, 4 p.m.	30·512	4th, 8 a.m.	·835	49·4	32·6	5th, 5 a.m.	69·1	30th, 5 p.m.	36·5	·245	69	0·765

* The means for two days are approximate only.

TABLE B., MAY.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at
The values are not
(The Stations are grouped in Districts, and then arranged in order of Latitude,

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit, and Mean Sea Level) from Observations made at 9 a.m. and 9 p.m.	AIR TEMPERATURE.									
			At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Means of			Absolute Extremes.			
						Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.
		ins.	°	°	°	°	°	°	°		°	
0. SCOTLAND, N.	Orkneys (Sandwick Manse)	30·134	47·8	45·3	46·6	42·7	51·5	47·1	34·0	1st	59·6	6th
1. SCOTLAND, E.	Glenalmond	30·183	48·6	46·1	47·4	39·2	58·1	48·7	30·5	3rd, 4th	65·0	27th
2. ENGLAND, N.E.	Seaham	30·174	50·9	46·8	48·9	42·2	54·1	48·2	32·8	3rd	65·2	30th
	Durham	30·158	51·7	43·7	47·7	39·9	56·4	48·2	29·6	3rd	69·0	29th
	Hull	30·173	51·6	47·2	49·3	41·8	57·5	49·7	31·0	3rd	67·5	21st, 28th
	Kelstern (Calcethorpe)	30·171	48·6	43·7	46·2	39·3	54·6	47·0	31·1	3rd	65·5	29th
3. ENGLAND, E.	Hillington	30·167	52·3	45·3	48·8	39·3	58·4	48·9	30·0	4th	68·5	21st
	Audley End	30·160	51·7	45·0	48·4	38·5	58·6	48·6	29·4	4th	69·7	21st, 30th
	Chigwell Row	30·181	51·0	46·6	48·8	40·1	57·2	48·7	32·3	2nd, 3rd	68·0	21st
4. MIDLAND COUNTIES.	Buxton	30·176	47·8	43·5	45·7	36·5	54·6	45·6	19·2	3rd	64·7	6th
	Cheadle	30·177	48·1	44·7	46·4	39·0	55·8	47·4	29·9	2nd	65·3	6th
	Leicester	30·165	50·6	48·8	49·7	40·3	57·9	49·1	32·1	3rd, 4th	67·6	21st
	Churchstoke	30·202	48·3	44·2	46·3	35·0	56·3	45·7	28·5	3rd	66·1	21st
	Oscott	30·171	48·8	46·3	47·6	39·7	58·3	49·0	31·2	2nd	70·0	21st
	Uppingham	30·152	50·9	45·1	48·0	39·3	58·8	49·1	31·4	3rd	67·7	6th
	Hereford	30·172	50·9	47·8	49·4	39·7	58·8	49·3	29·9	3rd	68·1	21st
5. ENGLAND, S.	Marlborough	30·167	49·6	46·8	48·2	38·5	58·8	48·7	29·8	14th	69·7	21st
	Strathfield Turgiss	30·156	52·1	47·1	49·6	38·5	60·4	49·5	28·7	2nd	70·5	21st
	Hastings	30·127	51·2	45·2	48·2	41·2	55·3	48·3	33·6	2nd, 3rd	63·8	31st
	Ramsgate	30·135	52·4	48·3	50·4	44·5	55·8	50·2	38·4	2nd	66·5	30th
	Folkestone	30·114	51·0	45·8	48·4	42·4	55·9	49·2	32·2	4th	66·0	28th
6. SCOTLAND, W.	——	—	—	—	—	—	—	—	—	—	—	—
7. ENGLAND, N.W.	Hawes	30·195	48·4	43·6	46·0	38·7	54·8	46·8	26·0	3rd	63·9	27th
	Llandudno	30·185	52·3	48·1	50·3	42·2	57·7	50·0	31·4	13th	66·0	30th
8. ENGLAND, S.W.	Caermarthen	30·152	53·4	48·6	51·0	41·3	60·5	50·9	32·5	3rd, 14th	65·7	19th
	Dartmoor	30·238	47·7	42·9	45·3	37·0	54·0	45·5	30·5	3rd, 13th	63·0	20th
9. IRELAND, N.	Markree	30·194	52·9	48·1	50·5	39·8	59·7	49·8	26·3	2nd	66·4	20th
10. IRELAND, S.	Dublin	30·213	52·2	49·6	50·9	44·1	56·9	50·5	32·2	2nd	67·3	21st
	Parsonstown	30·209	52·5	48·5	50·5	40·7	60·1	50·4	28·9	2nd	68·4	7th
CHANNEL	Jersey (St. Aubins)	30·150	53·4	48·3	50·9	44·8	57·0	50·9	39·2	3rd	65·3	28th

STATIONS of the SECOND ORDER in the BRITISH ISLANDS, during the Month of May, 1876.
corrected for Diurnal Range.
beginning in each case with the Station lying furthest to the Northward.)

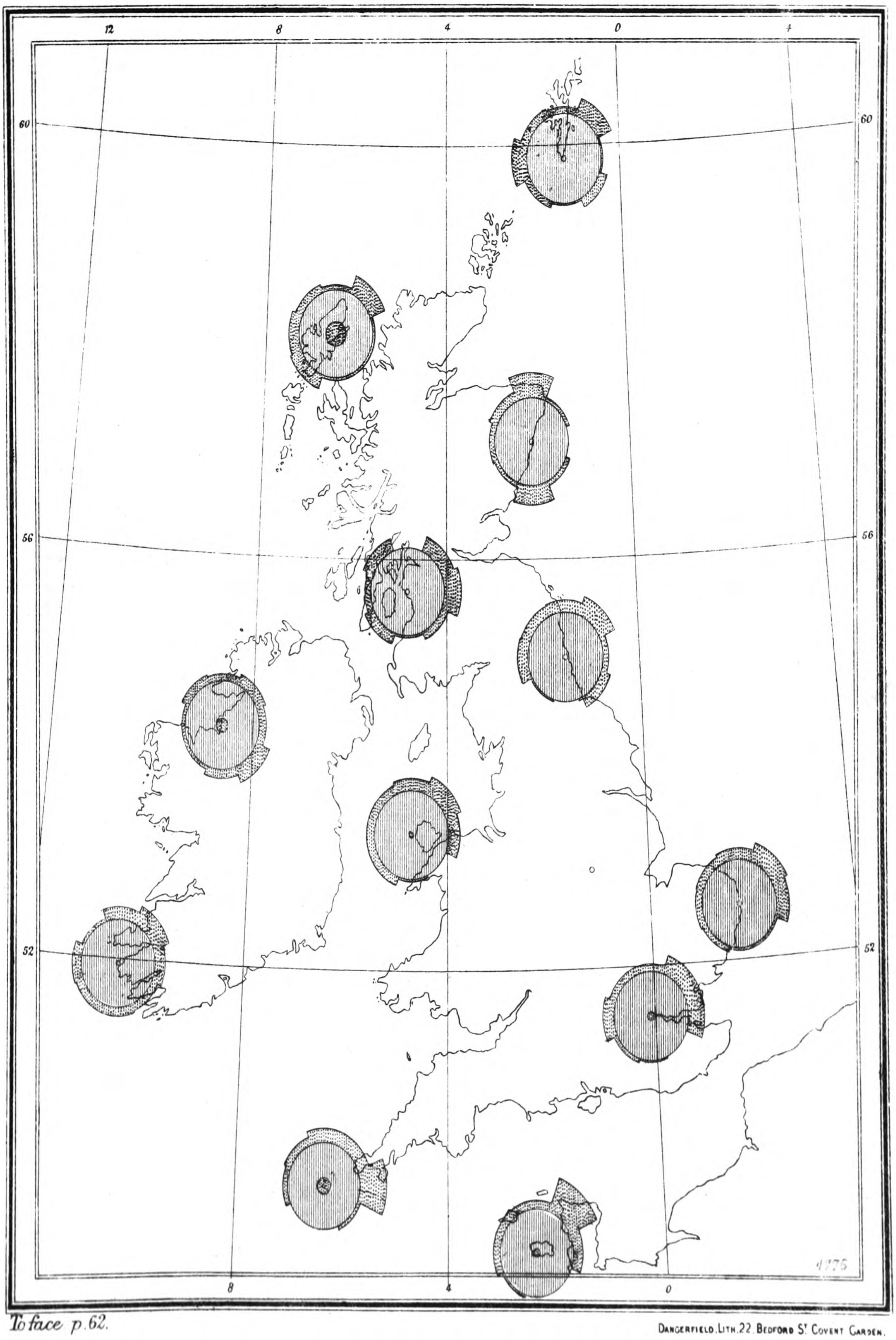
TENSION OF VAPOUR.			RELATIVE HUMIDITY.			AMOUNT OF CLOUD (0 to 10).			RAINFALL.			WEATHER. No. of Days of							WIND. No. of Observations of								
At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
ins.	ins.	ins.	%	%	%				ins.	ins.																	
·265	·261	·263	80	87	84	6·4	5·8	6·1	1·320	·350	21st	13	0	0	0	5	10	0	3	10	4	7	9	3	16	7	3
·244	·250	·247	72	81	77	5·8	5·4	5·6	0·570	·140	22nd	6	0	1	1	2	7	0	4	7	20	4	2	13	5	7	0
·320	·294	·307	87	92	90	6·7	5·5	6·1	1·000	·320	23rd	10	0	1	0	5	13	0	9	14	7	3	3	4	5	5	12
·293	·248	·271	76	87	82	7·0	5·3	6·2	1·211	·330	23rd	10	3	2	0	3	11	0	8	16	4	3	4	7	7	10	3
·307	·287	·297	81	89	85	6·5	4·7	5·6	1·040	·300	26th	8	0	0	1	2	7	0	4	24	9	0	2	4	7	10	2
·277	·261	·269	81	91	86	7·1	5·2	6·2	1·164	·280	22nd	10	0	1	0	2	8	0	13	17	8	1	2	10	5	3	3
·294	·261	·278	75	86	81	5·5	4·7	5·1	0·917	·300	22nd	8	1	2	1	3	4	5	7	15	17	7	0	1	19	2	0
·261	·250	·256	68	84	76	6·6	3·5	5·1	0·510	·100	22nd, 25th	7	0	3	0	3	7	0	1	22	1	1	0	7	3	13	14
·255	·250	·253	68	79	74	7·4	3·6	5·5	0·590	·440	24th	4	0	1	1	2	6	0	11	26	6	3	3	7	3	2	1
·264	·238	·251	79	83	81	7·5	5·8	6·7	1·330	·430	23rd	9	0	0	0	1	12	0	12	12	15	4	1	2	5	10	1
·242	·240	·241	72	81	77	6·5	3·7	5·1	1·410	·720	24th	9	4	2	2	4	6	1	7	13	10	0	0	4	3	8	17
·254	·257	·256	69	74	72	7·8	3·9	5·9	0·640	·210	24th	7	0	2	2	4	7	0	9	27	0	0	2	7	8	2	7
·262	·236	·249	77	81	79	4·8	5·6	5·2	0·477	·350	22nd	5	0	0	0	0	0	3	7	13	4	4	2	4	4	18	6
·263	·263	·263	76	83	80	7·9	3·6	5·8	0·610	·200	22nd	5	0	1	1	3	8	0	11	21	4	0	4	6	5	7	4
·269	·232	·251	73	77	75	7·7	5·2	6·5	0·518	·158	25th	11	1	2	0	2	11	0	4	32	1	2	3	6	3	10	1
·256	·250	·253	69	74	72	6·0	3·5	4·8	0·292	·120	23rd	6	0	0	0	6	6	0	4	13	11	0	0	1	7	4	22
·267	·265	·266	75	83	79	6·6	3·3	4·9	0·979	·630	22nd	6	0	1	1	5	7	0	9	18	7	0	1	2	3	1	21
·283	·263	·273	73	81	77	6·4	3·0	4·7	0·322	·198	24th	4	0	0	1	9	7	0	5	20	11	4	1	3	3	12	3
·278	·266	·272	73	87	80	5·4	2·1	3·8	1·400	1·140	24th	9	0	1	0	11	5	4	8	31	4	1	5	4	6	3	0
·309	·288	·299	78	85	82	6·0	3·8	4·9	1·083	·555	24th	8	0	1	0	4	6	4	9	23	10	1	3	1	1	6	8
·304	·289	·297	81	94	88	5·7	3·7	4·7	1·010	·550	25th	8	0	2	0	6	6	0	7	27	4	4	1	10	2	7	0
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
·247	·237	·242	73	83	78	7·4	6·4	6·9	0·840	·240	22nd	9	1	0	0	2	14	0	4	9	14	2	1	4	10	7	11
·273	·259	·266	69	77	73	4·6	3·9	4·3	0·255	·110	21st	6	0	1	0	12	6	0	2	14	22	1	0	5	13	5	0
·287	·271	·279	70	79	75	4·3	3·3	3·8	0·250	·070	22nd	5	0	0	0	15	8	0	9	7	18	0	0	2	4	5	17
·249	·232	·241	75	84	80	5·2	2·6	3·9	0·420	·200	22nd	7	0	0	0	8	4	7	10	16	18	0	0	0	5	7	6
·281	·270	·276	70	80	75	5·3	5·2	5·3	0·765	·203	22nd	10	0	0	0	8	10	0	7	7	5	14	8	3	4	9	5
·273	·277	·275	70	78	74	5·5	4·2	4·9	0·798	·305	22nd	6	0	2	1	8	5	0	3	11	19	3	1	2	8	9	6
·285	·276	·281	72	80	76	5·6	5·5	5·6	0·745	·258	22nd	6	0	0	0	7	11	0	5	4	7	14	4	4	7	12	5
·285	·271	·278	69	80	75	4·2	2·1	3·2	0·608	·425	23rd	4	0	1	0	15	4	4	7	32	8	1	0	2	5	6	1

TABLE C., MAY.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC REPORTING STATIONS in the BRITISH ISLANDS during the month of May, 1876. Observations are made at 8 a.m. daily.

(The Stations are grouped in Districts, and then arranged in order of Latitude, beginning in each case with the Station lying furthest North.)

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	AIR TEMPERATURE.								TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.			WEATHER, No. of Days of							WIND, No. of Observations of								
			At 8 a.m.	Means of Minima.	Means of Maxima.	Means of Min. and Max. combined.	Absolute Extremes. Minimum.	Date.	Maximum.	Date.				Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
		ins.	°	°	°	°	°		°		ins.	%		ins.	ins.																	
0. SCOTLAND, N.	Sumburgh Head	30·076	46·6	40·8	50·4	45·6	32	2nd	55	29th	·262	83	7·3	1·53	0·50	28th	15	0	0	0	4	16	0	3	8	1	4	1	3	7	4	0
	Stornoway	30·142	50·0	40·9	55·4	48·2	27	2nd	62	7th	·291	81	5·0	1·54	0·39	23rd	14	0	2	0	10	10	0	2	7	1	1	1	6	5	3	5
	Thurso	30·127	48·3	42·5	55·3	48·9	36	1st	67	6th	·278	83	7·3	1·72	0·42	21st	17	0	0	0	4	15	0	5	5	1	3	6	0	4	4	3
	Wick	30·131	47·9	40·3	54·3	47·3	24	3rd	62	29th	·273	83	6·3	1·05	0·37	21st	13	0	0	0	9	14	1	4	3	2	6	2	1	5	7	1
1. SCOTLAND, E.	Nairn	30·150	48·1	41·8	56·6	49·2	32	2nd	66	6th	·275	82	5·7	0·78	0·20	20th	11	0	0	0	10	13	1	1	5	1	0	0	1	4	5	14
	Aberdeen	30·132	49·6	43·1	55·3	49·2	35	1st, 3rd	69	29th	·257	72	5·5	0·56	0·12	21st	10	1	1	0	8	9	1	11	1	0	2	9	2	2	4	0
	Leith	30·173	50·1	42·6	59·7	51·2	34	2nd	72	27th	·290	80	5·0	0·82	0·33	22nd	8	1	1	0	11	10	0	2	6	7	2	0	0	8	6	0
2. ENGLAND, N.E.	Shields	30·168	49·0	43·7	53·4	48·6	34	3rd	64	28th, 29th	·270	77	6·2	0·94	0·36	23rd	10	1	1	0	7	13	1	5	8	2	4	0	1	6	5	0
	Scarborough	30·157	51·0	44·1	54·0	49·1	34	3rd	68	29th	·292	78	6·3	0·74	0·21	22nd	8	0	0	0	8	12	0	8	6	3	2	1	4	2	3	2
	York	30·164	49·2	40·5	59·0	49·8	29	3rd	69	6th	·285	82	6·0	0·64	0·30	22nd	10	0	0	0	8	10	0	6	3	5	1	0	4	6	6	0
3. ENGLAND, E.	Yarmouth	30·142	48·8	44·0	53·6	48·8	36	4th	70	30th	·280	81	4·3	0·78	0·15	26th	11	0	1	0	12	3	1	5	8	6	1	1	2	3	4	1
	Cambridge	30·149	49·8	39·4	61·2	50·3	31	4th	72	21st, 30th	·273	77	7·3	0·53	0·11	26th	10	0	1	0	5	15	0	3	10	3	1	1	4	1	7	1
4. MIDLAND COUNTIES.	Nottingham	30·176	49·1	39·1	60·9	50·0	30	3rd	71	21st, 29th 30th.	·284	81	6·3	0·64	0·27	22nd	8	0	0	0	10	15	1	7	6	2	1	6	3	2	4	0
	Oxford	30·146	48·5	40·2	59·7	50·0	31	3rd	70	21st	·263	77	7·0	0·80	0·39	24th	7	0	0	0	7	15	0	3	11	3	0	0	3	1	3	7
5. ENGLAND, S.	London	30·143	50·3	41·0	61·0	51·0	32	4th, 5th	73	30th	·273	75	7·1	1·07	0·53	24th	6	0	0	0	5	12	0	3	8	8	0	1	2	5	3	1
	Dover	30·109	51·5	45·1	54·5	49·8	37	2nd	62	31st	·276	73	4·3	1·21	0·45	24th	10	0	1	0	12	4	0	1	14	6	1	1	2	4	2	0
	Hurst Castle	30·122	49·1	41·5	56·2	48·9	34	3rd, 4th	67	27th	·309	89	3·0	0·08	0·03	24th	4	0	0	0	20	5	0	4	12	7	0	0	1	3	2	2
6. SCOTLAND, W.	Ardrossan	30·187	49·9	44·0	58·3	51·2	33	2nd	65	11th	·262	74	5·6	0·84	0·41	30th	7	0	0	0	11	11	0	0	6	8	3	1	5	3	5	0
7. ENGLAND, N.W.	Liverpool	30·173	49·2	43·4	56·4	49·9	36	1st	63	5th, 21st	·245	70	5·3	0·40	0·23	22nd	6	0	0	0	13	9	0	2	7	6	1	1	3	9	2	0
	Holyhead	30·177	48·9	45·0	55·8	50·4	38	2nd, 3rd	61	7th, 8th	·275	79	4·5	0·41	0·11	22nd	7	0	0	0	14	7	0	5	8	5	0	1	4	4	4	0
8. ENGLAND, S.W.	Pembroke	30·176	48·5	43·8	56·7	50·3	38	2nd, 3rd	62	17th	·268	79	3·2	0·10	0·03	23rd	5	0	0	0	18	4	0	3	7	10	2	0	1	2	4	2
	Portishead	30·159	48·8	41·0	60·3	50·7	34	3rd	67	21st, 31st	·272	78	5·9	0·27	0·11	23rd	6	0	0	0	9	12	1	7	11	3	0	0	1	5	4	0
	Plymouth	30·147	51·7	43·7	59·9	51·8	36	4th	68	29th, 31st	·293	77	3·5	0·13	0·06	22nd, 24th	3	0	0	0	15	8	1	1	6	10	1	0	1	2	7	3
9. IRELAND, N.	Greencastle	30·162	50·5	40·4	59·2	49·8	30	2nd	66	12th	·288	79	4·8	0·88	0·23	21st	8	0	0	0	16	9	0	2	5	4	3	5	4	4	4	0
	Donaghadee	30·190	49·4	44·6	56·8	50·7	34	3rd	65	29th	·283	81	5·3	0·58	0·27	22nd	8	0	0	0	12	11	0	3	6	5	4	2	3	3	5	0
10. IRELAND, S.	Kingstown	30·204	48·8	46·2	54·5	50·4	38	2nd, 3rd	64	30th	·268	77	4·6	0·67	0·24	23rd	6	0	0	0	12	7	1	1	5	5	3	2	0	5	8	2
	Roche's Point	30·195	51·3	46·2	60·8	53·5	38	2nd	70	20th	·289	76	3·8	0·37	0·24	24th	3	0	0	0	11	1	0	7	2	7	6	2	1	3	3	0
	Valencia	30·204	53·3	41·6	58·4	50·0	36	2nd	65	7th	·300	73	4·2	0·64	0·18	21st, 24th	9	0	0	0	15	5	0	6	7	4	2	3	3	4	2	0
—	Scilly	30·162	51·3	45·8	54·9	50·4	41	3rd, 4th	60	20th	·305	80	5·8	0·31	0·18	23rd	4	0	0	0	6	7	0	5	5	13	1	0	0	2	3	2

MONTHLY WIND CHART — MAY 1876.

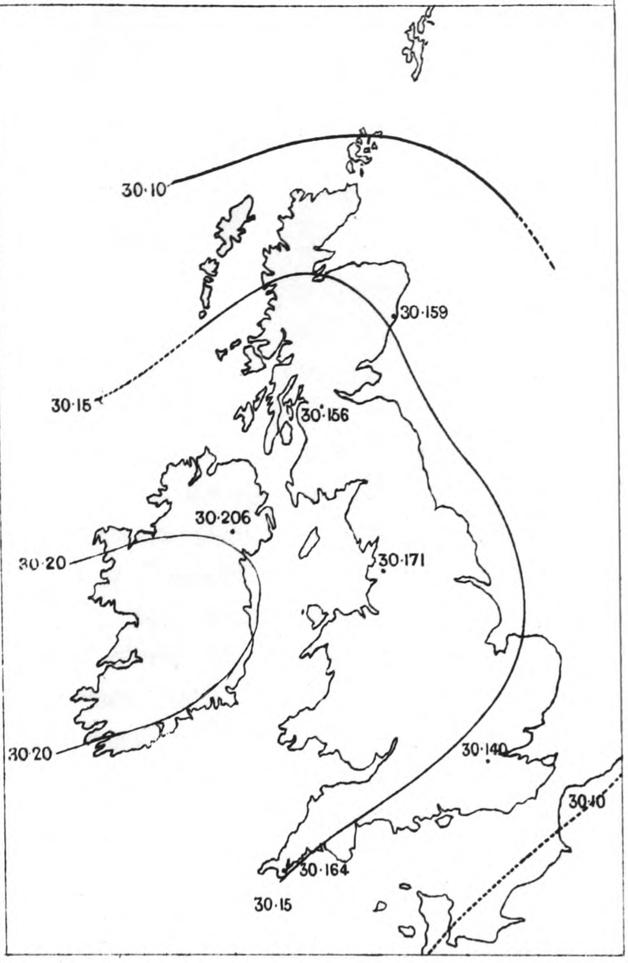

12
8
4
0
4
60
60
56
56
52
52
8
4
0

To face p. 62.

DANGERFIELD, LITH. 22. BEDFORD ST. COVENT GARDEN.

MONTHLY WEATHER CHART – MAY 1876.

1. DISTRIBUTION OF MEAN PRESSURE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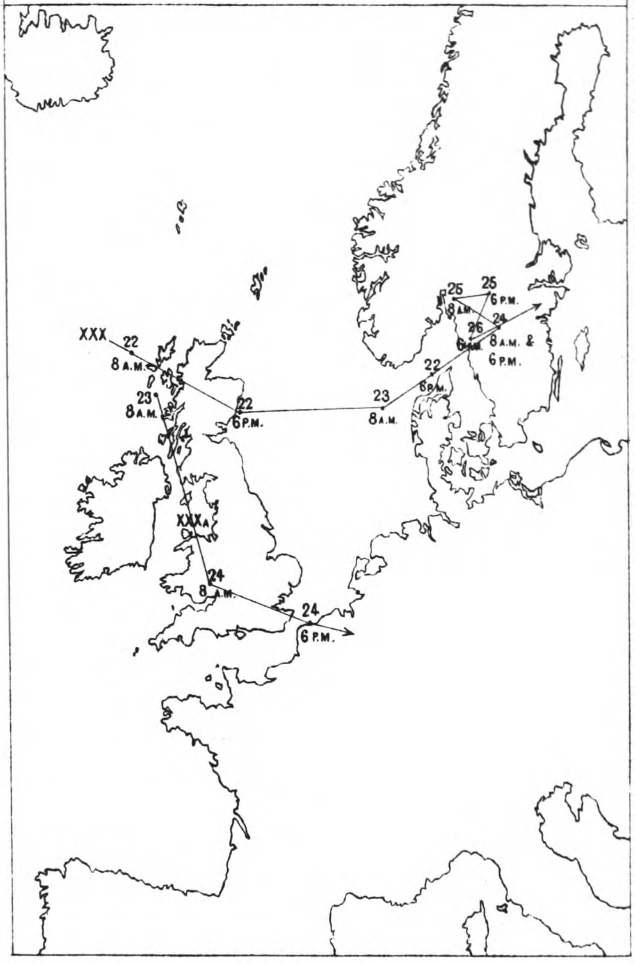
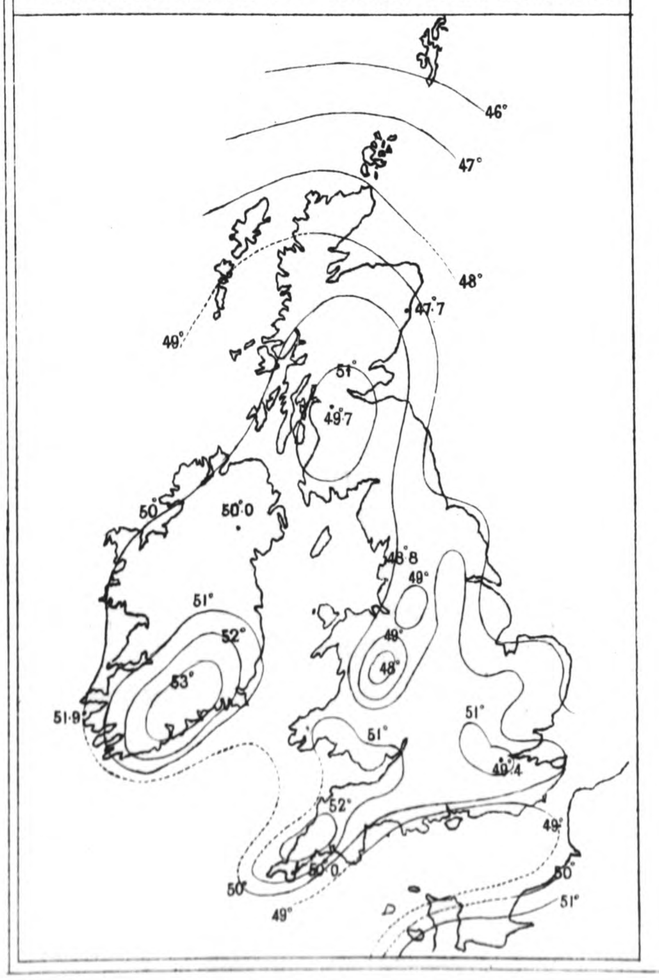
30·159
30·15
30·156
30·206
30·20
30·171
30·20
30·140
30·10
30·164
30·15

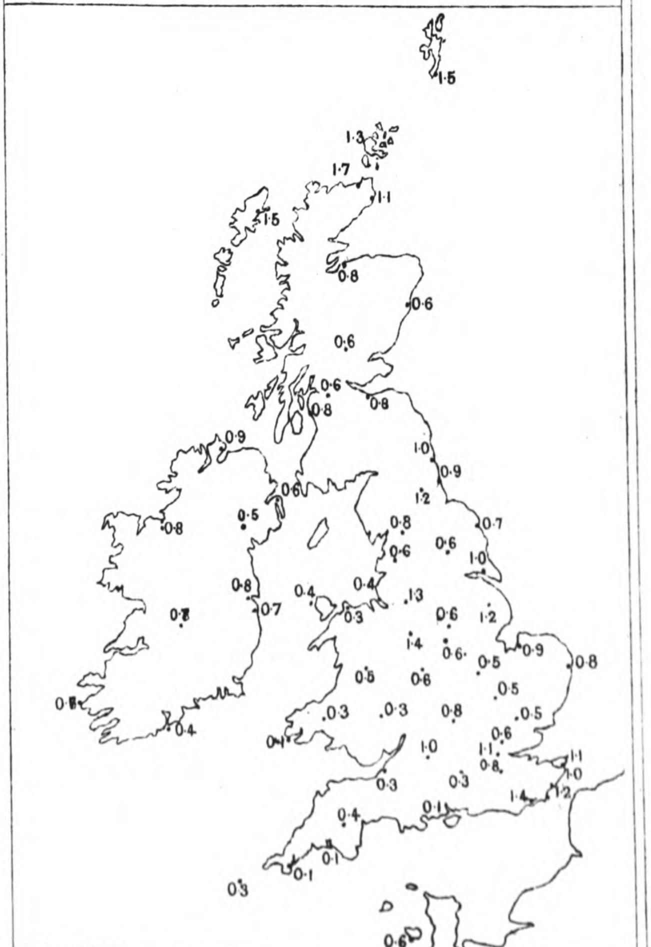
2. MOVEMENTS OF DEPRESSIONS.


XXX
22
8 A.M.
23
8 A.M.
22
6 P.M.
23
8 A.M.
22
6 P.M.
25
8 A.M.
25
6 P.M.
26
6 A.M.
24
24
8 A.M. &
6 P.M.
XXX A
24
8 A.M.
24
6 P.M.

3. DISTRIBUTION OF MEAN TEMPERATURE.


46°
47°
48°
47·7
49°
51°
49·7
50°
50·0
48·8
49°
49°
48°
51°
52°
53°
51·9
51°
51°
49·4
52°
49°
50°
50·0
50°
49°
51°

4. RAINFALL


1·5
1·3
1·7
1·1
1·5
0·8
0·6
0·6
0·6
0·8
0·8
0·9
1·0
0·9
1·2
0·6
0·5
0·8
0·8
0·7
0·6
0·6
1·0
0·8
0·7
0·4
0·4
·13
0·3
0·6
1·2
0·7
1·4
0·6
0·5
0·9
0·8
0·5
0·6
0·5
0·8
·0·3
·0·3
0·8
·0·5
0·4
0·4
1·0
0·6
1·1
0·8
1·1
1·0
0·3
0·3
1·4
1·2
0·4
0·11
0·1
0·1
0·3
0·6

To follow Wind Chart for May.

DANGERFIELD LITH 22 BEDFORD ST COVENT GARDEN
4777

REMARKS FOR JUNE, 1876.

(*Tables A. to C.*, JUNE, *with Monthly Wind and Weather Charts.*)

Wind.—At the commencement of the month anticyclonic airs and calms prevailed over Ireland, England, and the N. of France, while South-westerly breezes were being felt in Scotland, and Easterly over the Bay of Biscay. The South-westerly wind gradually spread over our islands and increased in strength, and, after blowing somewhat strongly on the 4th and 5th, lulled considerably and became rather variable. After the 8th a change occurred; the wind veering Northwards very generally, and blowing strongly in places; on the 10th it began to back slowly again over the northern parts of the kingdom, and by the 12th had become South-westerly, while over England the direction remained North-westerly. The South-westerly current, however, again spread gradually, and from the 14th to 18th, South-westerly and Westerly winds were prevalent. A further backing to S. and S.E. then took place, until, on the 22nd, shallow depressions began to appear over France, and pressure being still high over Northern Europe, the wind first became Easterly over the British Isles, but subsequently backed to N.E., North, and N.W. The prevailing winds during the month were thus South-easterly to South-westerly in the N.W. and N., Westerly to Northerly in the East and South; their force was generally moderate, and gales were rare.

Pressure.—The mean pressure for the month (at 8 a.m.) ranged from a little above 30 inches over our South-western and Southern counties, to 29·85 inches in the Hebrides and Orkneys, showing a decrease from that of May amounting to nearly a quarter of an inch over Ireland and Scotland, and to rather more than a tenth of an inch in the S.E. of England. The relative distribution was, however, much more like its normal condition for the time of year than was that of May. The highest readings occurred on the 10th in Ireland and Scotland, but on the 1st in England, while the lowest were recorded between the 3rd and 5th on our N. and N.W. coasts (during the prevalence of the cyclonic systems Nos. XXXI. and XXXII.), on the 9th at Falmouth and Kew, and on the 21st at Valencia. None of the extremes (either highest or lowest) were at all worth particular mention, and the range was small everywhere; the only one of the observatories at which it exceeded an inch being Aberdeen. In the S. of England the range was only about 0·55 inch.

Movements of Depressions.—Only four depressions worthy of note were observed within our area. Three of these travelled in a North-easterly direction, past our extreme N. and N.W. coasts, while one was apparently formed over France, and after moving Northwards for about 14 hours, travelled in an East-north-easterly direction to North Germany, where it dispersed. A few thunderstorm depressions passed over the country, producing somewhat serious effects locally, but nothing abnormal was reported. The high-pressure (*anticyclonic*) areas were continuous and well defined. That of the first passed completely over us, but the remainder lay at some distance from our islands, though frequently spreading more or less over the Kingdom.

Temperature.—The mean temperature of the month varied from a little above 60° over the Home and Midland Counties, and a little above 58° over the S.E. of Ireland to a little below 55° in the N.W. of Ireland, to 53° in the Hebrides, and to 52° in the Shetlands. These values differ but little from the means for the 13 years 1857–69, being but slightly in excess over the North of England, and very slightly in defect over the south-eastern parts of England and Ireland. The highest readings recorded during the month ranged from 86° over some of the Midland Counties to 75° at Aberdeen, 69° at Sumburgh Head, and 64° at Scilly. They were recorded between the 20th and 26th almost everywhere. The lowest readings, however, occurred on very different dates in the various districts, and while the total range for the month was only 16° at Scilly and about 28° at Falmouth and Sumburgh Head, it was as much as 50° at Strathfield Turgiss, 44° at Kew, and 40° at Glasgow.

Vapour Tension varied greatly, but on the whole was lowest over the Midland Counties; to this, however, there are some local exceptions, the values for York and Nottingham being singularly in excess of those at the other inland stations.

Relative Humidity was lowest over our N.E. and E. counties, but the values are by no means evenly distributed.

Rainfall.—This was much greater than in May, the amounts measured being above an inch at all stations excepting Dover and Jersey. They were, nevertheless, nearly all below the average, exceptional cases of wet weather being met with in the Fens and at some extreme Northern stations.

TABLE A., JUNE.—SHOWING the MEAN and EXTREME PRESSURES and TEMPERATURES recorded at each of the SEVEN SELF-RECORDING OBSERVATORIES of the METEOROLOGICAL OFFICE during the Month of June, 1876, together with the EXTREME RANGE of each, the MONTHLY VAPOUR TENSION, the RELATIVE HUMIDITY, and TOTAL RAINFALL.

NAMES OF OBSERVATORIES.	PRESSURES at 32° F. and the Mean Sea Level.						TEMPERATURE In the Shade.						HYGROMETRIC VALUES.		RAINFALL.
	Mean for the Month.	Extremes.				Range.	Mean for the Month.	Extremes.				Range.	Tension of Vapour.	Relative Humidity (Saturation = 100.)	
		Minimum.		Maximum.				Minimum.		Maximum.					
		Reading.	Date.	Reading.	Date.			Reading.	Date.	Reading.	Date.				
	ins.	ins.	D. H.	ins.	D. H.	ins.	°	°	D. H.	°	D. H.	°	in.	%	ins.
Valencia - -	29·985	29·546	21st, 5 a.m.	30·381	10th, 10 a.m.	·835	55·4	44·8	1st, 5 a.m.	74·6	25th, 5 p.m.	29·8	·348	80	2·732
Armagh - -	·955	·411	4th, Midt.	·326	10th, 9 a.m.	·915	55·1	42·0	10th, 4 a.m.	75·3	26th, 2 p.m.	33·3	·338	78	1·730
Glasgow - -	·907	·257	5th, 3 a.m.	·231	10th, 9 a.m.	·974	55·5	41·0	1st, 4 a.m.	81·3	20th, 3 p.m.	40·3	·321	73	3·260
Aberdeen - -	29·922	·218	5th, 6 a.m.	·231	10th, { 11 a.m. & Noon	1·013	54·2	39·3	4th, 3 a.m.	76·7	25th, 2 p.m.	37·4	·306	73	0·910
Falmouth - -	30·030	·754	9th, 5 a.m.	·299	10th, 10 p.m.	·545	57·0	47·0	14th, 5 a.m.	74·9	26th, 4 p.m.	27·9	·361	77	1·755
Stonyhurst -	29·970	·512	3rd, 6 p.m.	·260	1st, { 6 a.m. & 11 a.m.	·748	56·6	41·6	11th, 4 a.m.	80·0*	20th, 3 p.m.	38·4	·340	74	4·584
Kew - -	29·994	29·716	9th, 6 a.m.	30·280	1st, 8 a.m.	·564	59·2	40·2	11th, 4 a.m.	84·0	21st, 2 p.m.	43·8	·360	72	1·465

* Probable, but trace is very faint.

TABLE B., JUNE.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at
The values are not

(The Stations are grouped in Districts, and then arranged in order of

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit, and Mean Sea Level) from Observations made at 9 a.m. and 9 p.m.	AIR TEMPERATURE.									
			At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Means of			Absolute Extremes.			
						Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.
		ins.	°	°	°	°	°	°	°		°	
0. SCOTLAND, N.	Orkneys (Sandwick Manse)	29·868	54·5	51·7	53·1	47·7	58·9	53·3	42·6	4th	74·4	24th
1. SCOTLAND, E.	Glenalmond	29·933	55·3	52·0	53·7	43·7	62·6	53·2	34·3	16th	78·0	25th
2. ENGLAND, N.E.	Seaham	29·959	57·8	53·0	55·4	47·4	62·4	54·9	39·8	11th	70·2	19th
	Durham	29·944	60·9	51·0	56·0	46·0	66·9	56·5	37·9	11th	82·6	20th
	Hull	29·985	60·4	55·8	58·1	49·2	67·4	58·3	41·0	12th	78·0	20th
	Kelstern (Calcethorpe)	29·990	57·0	52·4	54·7	47·0	63·5	55·3	37·9	11th	73·4	20th
3. ENGLAND, E.	Hillington	29·982	60·0	53·4	56·7	47·2	67·2	57·2	34·2	11th	79·6	20th
	Audley End	29·996	60·6	55·1	57·9	48·4	67·7	58·1	35·2	11th	80·7	21st
	Chigwell Row	30·031	58·9	56·5	57·7	49·7	65·6	57·7	38·3	11th	77·5	20th
4. MIDLAND COUNTIES.	Buxton	29·989	55·8	50·9	53·4	45·0	62·7	53·9	36·0	11th	78·1	21st
	Cheadle	29·984	56·4	53·1	54·7	46·8	63·3	55·1	38·0	4th	79·0	21st
	Leicester	29·984	59·6	57·7	58·7	48·7	66·6	57·7	38·4	11th	82·2	21st
	Churchstoke	30·005	57·0	53·1	55·1	44·2	64·8	54·5	33·0	2nd	81·0	20th
	Oscott	29·989	57·6	54·9	56·3	47·7	65·9	56·8	40·1	4th	81·7	21st
	Uppingham	29·979	60·1	54·7	57·4	48·1	67·8	58·0	39·3	11th	86·1	21st
	Hereford	29·994	59·9	56·0	58·0	47·6	67·7	57·7	34·7	1st	81·9	21st
5. ENGLAND, S.	Marlborough	30·011	60·0	55·2	57·6	47·8	68·8	58·3	36·5	11th	82·7	21st
	Strathfield Turgiss	30·011	60·8	55·8	58·3	47·1	69·7	58·4	34·3	11th	84·5	21st
	Hastings	30·007	58·9	55·1	57·0	51·0	64·3	57·7	41·3	11th	82·1	21st
	Ramsgate	30·010	59·0	56·3	57·7	51·8	64·5	58·2	44·1	1st	75·1	22nd
	Folkestone	29·995	58·3	55·0	56·7	50·7	64·1	57·4	42·5	1st	79·2	21st
6. SCOTLAND, W.	—	—	—	—	—	—	—	—	—	—	—	—
7. ENGLAND, N.W.	Hawes	29·982	57·2	51·3	54·3	44·5	63·3	53·9	35·3	1st	79·5	27th
	Llandudno	29·975	60·4	55·4	57·9	50·0	66·7	58·4	42·4	1st	86·0	20th & 21st
8. ENGLAND, S.W.	Caermarthen	29·978	60·3	54·8	57·6	48·6	66·8	57·7	40·2	1st	79·9	26th
	Dartmoor	30·081	55·4	50·8	53·1	45·2	62·8	54·0	39·5	4th	73·6	27th
9. IRELAND, N.	Markree	29·928	56·2	52·7	54·5	46·1	62·8	54·5	34·3	1st	73·6	20th
10. IRELAND, S.	Dublin	29·983	59·6	55·9	57·8	49·5	64·6	57·1	42·9	10th	75·8	20th
	Parsonstown	29·975	57·2	53·7	55·5	47·6	64·7	56·2	37·5	10th	83·7	26th
CHANNEL	Jersey (St. Aubins)	30·071	60·0	55·6	57·8	51·6	64·9	58·3	47·2	11th	78·0	20th

STATIONS of the SECOND ORDER in the BRITISH ISLANDS, during the month of June, 1876. corrected for Diurnal Range.

Latitude, beginning in each case with the Station lying furthest North.)

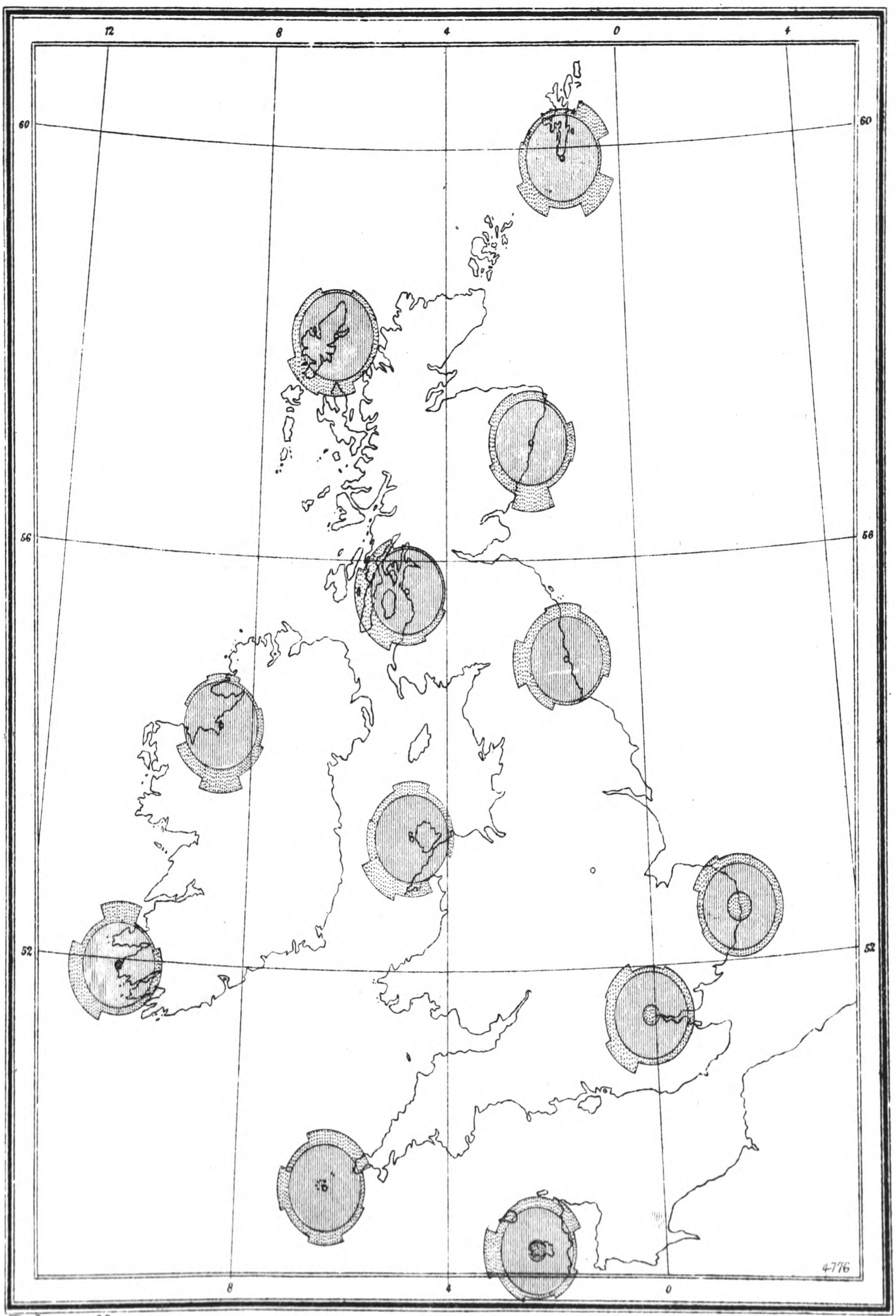
TENSION OF VAPOUR.			RELATIVE HUMIDITY.			AMOUNT OF CLOUD (0 to 10).			RAINFALL.			WEATHER, No. of Days of							WIND, No. of Observations of								
At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
ins.	ins.	ins.	%	%	%				ins.	in.																	
·328	·317	·323	77	83	80	4·7	4·2	4·5	1·450	·350	3rd	12	1	0	0	9	7	3	4	1	0	12	12	9	12	8	2
·316	·308	·312	72	78	75	6·4	5·2	5·8	3·720	·840	21st	12	0	0	0	2	8	0	2	4	6	4	9	14	10	4	6
·377	·363	·370	79	90	85	5·6	4·5	5·1	1·890	1·120	21st	11	0	0	2	6	5	0	10	3	4	4	10	8	6	2	13
·380	·331	·356	71	89	80	6·2	4·7	5·5	2·810	1·429	22nd	12	0	0	2	2	6	0	5	8	3	2	9	12	5	8	8
·390	·370	·380	74	83	79	5·7	5·4	5·6	2·910	·480	13th	11	0	0	0	5	7	1	2	11	4	7	7	11	11	7	0
·373	·363	·368	79	92	86	5·9	6·1	6·0	2·711	·715	13th	13	0	0	1	4	10	0	7	3	7	7	11	12	8	4	1
·393	·369	·381	76	90	83	6·6	6·0	6·3	2·711	·775	23rd	16	0	0	3	4	11	3	3	12	7	5	5	9	15	3	1
·362	·378	·370	68	87	78	6·1	5·2	5·7	1·450	·660	15th	11	0	0	1	3	9	0	5	9	1	4	2	19	0	9	11
·355	·363	·359	71	79	75	7·1	6·4	6·8	1·460	·680	15th	9	0	0	1	0	9	0	10	11	10	1	7	8	5	5	3
·333	·318	·326	75	85	80	6·7	7·9	7·3	4·475	1·130	9th	19	0	1	2	1	15	0	3	4	3	3	0	8	8	28	3
·338	·327	·333	74	81	78	5·9	5·5	5·7	2·910	·810	9th	16	0	1	4	[illegible]	10	1	11	2	6	3	4	10	5	15	4
·344	·361	·353	68	76	72	6·5	5·9	6·2	1·970	·650	13th	14	0	0	1	5	13	2	8	4	4	3	4	10	12	6	9
·341	·307	·324	73	75	74	4·5	5·3	4·9	1·070	·280	3rd	10	0	0	0	0	0	1	2	7	1	7	1	8	7	16	11
·354	·353	·354	74	82	78	6·5	6·4	6·5	2·470	·680	9th	13	0	0	4	3	11	0	8	8	4	2	6	13	4	11	4
·391	·382	·387	76	89	83	7·0	8·4	7·7	1·720	·657	13th	11	0	0	1	0	17	3	4	10	0	4	5	16	4	14	3
·348	·341	·345	67	76	72	5·6	5·3	5·5	1·163	·370	9th	11	0	0	1	5	7	0	4	4	4	2	4	5	7	2	28
·369	·362	·366	71	83	77	6·1	4·6	5·4	1·976	·597	15th	9	0	0	0	7	8	0	5	6	3	1	2	5	9	2	27
·381	·381	·381	72	85	79	6·0	5·0	5·5	2·137	·560	13th	11	0	0	1	8	10	0	9	6	2	3	2	11	2	7	8
·388	·377	·383	78	87	83	6·1	6·1	6·1	1·360	·300	8th	15	0	1	5	6	13	0	11	10	5	6	5	15	6	2	0
·398	·398	·398	80	87	84	6·8	4·6	5·7	1·155	·310	22nd	11	0	0	3	1	8	0	15	6	6	0	10	9	5	2	7
·392	·378	·385	80	88	84	6·0	4·9	5·5	1·580	·580	24th	13	0	0	1	7	8	0	13	5	10	0	7	13	3	1	8
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
·344	·324	·334	73	85	79	6·4	6·4	6·4	3·710	·690	3rd	15	0	1	3	2	12	0	3	0	8	3	5	13	11	3	14
·366	·339	·353	70	77	74	5·5	4·8	5·1	2·155	·675	21st	12	0	0	1	6	6	0	9	4	4	0	2	9	25	7	0
·389	·353	·371	75	82	79	5·6	4·3	5·0	2·510	·850	14th	9	0	0	0	7	6	0	7	4	1	2	3	8	8	3	24
·334	·320	·327	77	86	82	6·3	7·2	6·8	3·860	·690	15th	15	0	1	0	2	14	1	5	5	2	2	3	12	5	11	15
·345	·337	·341	76	84	80	8·3	6·8	7·6	1·569	·283	8th	16	0	2	0	2	18	0	7	1	4	7	20	10	1	4	6
·342	·340	·341	67	76	72	6·1	4·4	5·3	1·260	·436	13th	14	0	0	0	3	2	1	5	1	7	2	6	11	18	6	4
·364	·345	·355	78	83	81	7·3	5·5	6·4	1·574	·212	3rd	18	0	2	0	3	10	0	2	1	1	6	6	16	12	10	6
·381	·370	·376	74	84	79	6·3	4·4	5·4	0·655	·187	6th	12	0	0	0	5	7	0	9	10	1	4	2	6	15	6	7

TABLE C., JUNE.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC REPORTING STATIONS in the BRITISH ISLANDS, during the month of June, 1876. Observations are made at 8 a.m. daily.

The Stations are grouped in Districts, and then arranged in order of Latitude, beginning in each case with the Station lying furthest North.

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit, and Mean Sea Level) from Observations made at 8 a.m.	AIR TEMPERATURE.								TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.			WEATHER. No. of Days of							WIND. No. of Observations of								
				Means of			Absolute Extremes.																									
			At 8 a.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.				Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
		ins.	°	°	°	°	°		°		ins.	%		ins.	ins.																	
0. SCOTLAND, N.	Sumburgh Head	29·838	52·0	46·9	56·7	51·8	41	10th	69	24th	·338	87	6·6	1·08	0·26	4th	16	0	0	0	7	14	0	2	6	1	8	2	6	3	2	0
	Stornoway	29·840	54·4	46·9	59·1	53·0	38	4th	71	20th, 21st	·353	83	6·6	4·26	0·74	4th	23	0	4	0	6	14	9	1	2	2	2	6	8	4	3	2
	Thurso	29·861	55·2	46·7	62·2	54·5	36	4th	74	20th	·340	78	5·5	1·89	0·46	7th	18	0	0	0	9	10	1	1	0	0	3	10	4	3	5	4
	Wick	29·868	54·2	46·1	60·5	53·3	38	4th	74	25th	·330	78	4·3	1·45	0·59	3rd	11	0	0	0	16	7	1	1	0	2	8	5	3	3	6	2
1. SCOTLAND, E.	Nairn	29·890	56·5	48·1	65·9	57·0	40	4th, 14th	86	20th	·339	74	4·3	2·36	0·85	22nd	7	0	0	0	14	7	0	0	0	2	2	1	12	5	1	7
	Aberdeen	29·897	56·4	47·7	63·7	55·7	38	4th	78	25th	·319	70	4·4	1·05	0·29	22nd	8	0	0	0	14	7	1	3	1	3	2	10	4	2	4	1
	Leith	29·929	57·5	47·8	68·1	58·0	40	17th	83	20th	·370	78	4·7	2·39	0·82	22nd	9	0	0	0	10	7	0	1	2	6	0	1	6	11	3	0
2. ENGLAND, N.E.	Shields	29·959	55·5	49·1	61·3	55·2	43	1st, 4th, 10th, 11th.	72	11th	·355	80	5·8	2·01	0·76	21st	10	0	0	2	7	10	3	5	2	3	1	1	4	8	4	2
	Scarborough	29·975	57·5	50·3	61·2	55·8	42	4th	70	19th	·355	75	5·3	2·47	1·37	22nd	8	0	0	1	9	9	0	7	3	3	3	3	5	4	1	1
	York	29·974	57·3	48·0	67·4	57·7	38	11th	80	20th	·418	89	5·2	2·53	0·90	21st	10	0	0	0	11	10	0	3	4	2	0	3	4	10	4	0
3. ENGLAND, E.	Yarmouth	29·997	56·6	51·3	61·1	56·2	43	1st	71	22nd	·378	82	4·6	1·41	0·43	16th	13	0	0	0	12	4	0	4	3	3	2	2	3	2	5	6
	Cambridge	29·999	58·5	48·7	70·4	59·6	38	10th	84	21st	·395	81	7·5	1·71	0·56	15th	14	0	0	0	6	15	0	9	2	2	2	3	5	3	4	0
4. MIDLAND COUNTIES.	Nottingham	29·997	60·2	47·6	71·2	59·4	37	11th	86	21st	·404	77	5·2	1·92	0·69	23rd	12	0	0	0	11	9	2	3	3	0	2	8	6	4	4	0
	Oxford	29·985	57·4	49·5	69·6	59·6	38	11th	86	21st	·355	75	6·9	2·08	0·49	15th, 22nd	11	0	0	0	7	16	0	5	3	0	2	3	3	5	5	4
5. ENGLAND, S.	London	30·001	59·0	49·8	70·5	60·2	38	11th	86	21st	·370	74	5·5	1·27	0·34	15th	12	0	0	0	9	10	0	2	3	3	2	2	6	4	5	3
	Dover	29·988	58·8	53·0	62·3	57·7	45	12th	73	21st	·386	78	3·9	0·80	0·23	8th	13	0	0	0	13	1	0	1	7	4	2	0	7	5	4	0
	Hurst Castle	29·998	58·5	50·6	63·6	57·1	42	11th	75	20th	·406	83	4·1	1·37	0·62	15th	11	0	0	0	15	7	0	4	4	3	1	2	3	6	4	3
6. SCOTLAND, W.	Ardrossan	29·939	55·5	50·2	62·9	56·6	41	10th	80	21st	·338	77	4·5	3·94	0·76	3rd	13	0	0	0	11	5	3	1	1	1	2	4	8	8	5	0
7. ENGLAND, N.W.	Liverpool	29·973	56·8	50·4	63·5	57·0	44	4th	82	21st	·328	71	5·4	1·62	0·47	21st	13	0	0	0	12	11	0	0	2	2	5	1	3	13	3	1
	Holyhead	29·972	54·4	50·8	62·3	56·6	45	1st	80	20th	·359	85	5·4	1·83	0·57	14th	12	0	0	0	9	7	1	5	2	2	0	5	9	4	3	0
8. ENGLAND, S.W.	Pembroke	29·993	55·4	51·1	61·3	56·2	44	1st	71	20th, 26th	·361	83	4·9	1·42	0·48	14th	18	0	0	0	12	8	3	4	3	1	2	3	3	5	5	4
	Portishead	30·001	58·1	49·8	68·0	58·9	43	1st	85	21st	·392	80	5·6	1·21	0·32	3rd	11	0	0	0	9	9	2	2	4	1	1	3	6	9	4	0
	Plymouth	30·011	58·6	51·3	66·7	59·0	43	14th	80	26th	·396	80	6·1	1·64	0·38	15th	16	0	0	0	8	15	1	3	2	2	0	5	6	3	5	4
9. IRELAND, N.	Greencastle	29·901	54·7	46·2	62·9	54·6	38	1st	75	20th, 21st	·345	81	6·7	2·70	0·45	4th	17	0	0	0	8	16	0	4	0	3	5	3	4	8	3	0
	Donaghadee	29·947	54·5	48·2	61·0	54·6	41	4th, 6th, 7th.	68	1st, 20th	·360	85	4·3	2·57	0·47	3rd	14	0	0	0	15	8	2	6	3	2	1	4	5	7	2	0
10. IRELAND, S.	Kingstown	29·984	55·1	51·5	61·8	56·7	46	10th	70	24th	·331	76	4·7	1·55	0·52	8th	9	0	0	0	9	5	0	1	0	1	4	5	1	8	10	0
	Roche's Point	29·993	56·2	50·3	66·8	58·6	45	4th, 14th, 16th.	80	27th	·362	80	5·3	1·63	0·38	3rd	10	0	0	0	9	7	1	4	2	1	2	4	5	6	6	0
	Valencia	29·977	55·7	50·0	61·2	55·6	45	1st	73	24th, 25th	·361	81	6·4	2·79	0·47	14th	20	0	0	0	6	12	1	8	1	2	2	2	6	6	2	1
—	Scilly	30·027	56·7	52·1	60·3	56·2	48	8th, 9th, 16th.	64	26th	·401	87	6·7	1·78	0·57	14th	18	0	0	0	6	13	1	5	5	1	2	5	4	5	3	0

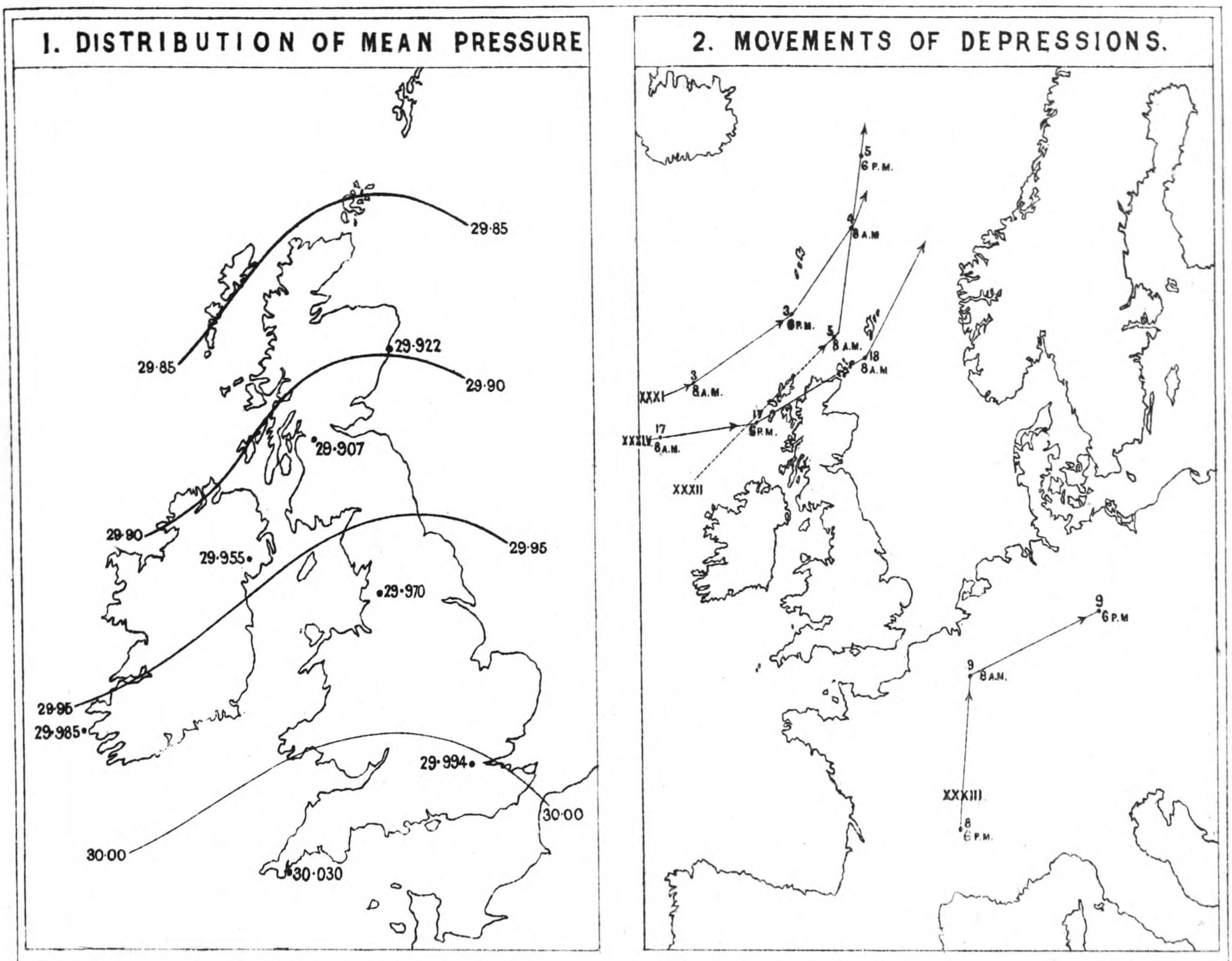
MONTHLY WIND CHART—JUNE 1876.


12
8
4
0
4
60
60
56
56
52
52
8
4
0
4776

To face p. 68.

DANGERFIELD LITH. 22. BEDFORD ST. COVENT GARDEN.

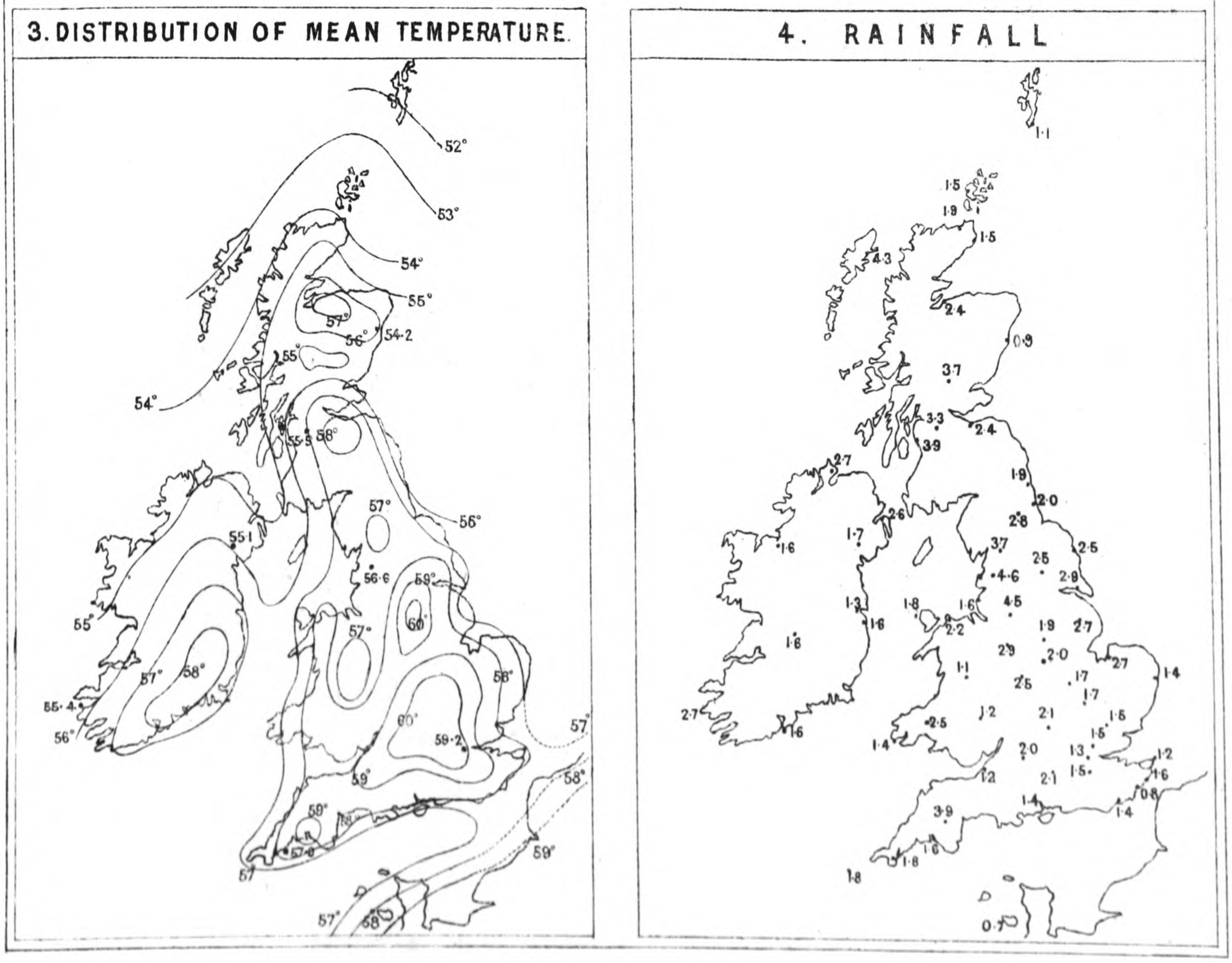
Monthly Weather Chart - June 1876.



1. DISTRIBUTION OF MEAN PRESSURE

2. MOVEMENTS OF DEPRESSIONS.

29·85
29·85
29·922
29·90
29·907
29·90
29·955
29·95
29·970
29·95
29·985
29·994
30·00
30·00
30·030
5
6 P.M.
4
8 A.M.
3
6 P.M.
5
8 A.M.
18
8 A.M.
XXXI
3
8 A.M.
17
6 P.M.
XXXIV
17
8 A.M.
XXXII
9
6 P.M.
9
8 A.M.
XXXIII
8
6 P.M.



3. DISTRIBUTION OF MEAN TEMPERATURE.

4. RAINFALL

52°
53°
54°
55°
57°
56°
54·2
55°
54°
55·5
58°
57°
56°
55·1
56·6
59°
60°
55°
57°
58°
57°
58°
55·4
56°
60°
59·2
57°
58°
59°
59°
57·0
57
59°
57°
58°
1·1
1·5
1·9
1·5
4·3
2·4
0·9
3·7
3·3
2·4
3·9
2·7
1·9
2·0
2·6
2·8
1·7
1·6
3·7
2·5
2·5
4·6
2·9
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1·4
2·0
1·3
1·2
1·2
2·1
1·5
1·6
1·4
0·8
3·9
1·4
1·6
1·8
1·8
0·7

To follow Wind Chart for June

Dangerfield Lith. 22 Bedford St. Covent Garden
4777

PART 3.

GENERAL SUMMARY FOR THE QUARTER.

THE fluctuations of atmospheric pressure over the British Islands did not attain a great extent, the highest reading of the barometer recorded during the three months being under 30·5 ins., and the lowest only just below 29·0 ins. On the other hand, the range of temperature was large, the maxima for August over the South-eastern Counties and Midlands of England reaching 96°, while the minima in September fell below 40° over the Northern portion of the country.

The depressions observed during the first part of the period generally moved in a north-easterly direction, in a track which lay to the Northward of Great Britain, and the accompanying winds were not, as a rule, very strong. A very well-defined area of high pressure then became developed over France and England, accompanied by light anti-cyclonic airs and calms; the breaking up of this system was followed by the passage of another series of depressions, which did not, however, continue many days, and then by a second anticyclone, which lasted till near the end of August. This last was again succeeded by a third series of depresssions, some of which, passing over the Southern portion of the kingdom, caused strong Easterly winds to blow in the Midlands and Scotland, and Westerly winds in the neighbourhood of the Channel and over France.

July 1st.—Pressure was moderately high over Western France and the Bay of Biscay, but in the neighbourhood of the Hebrides there was a large, though shallow, depression; light or moderate South-westerly winds consequently prevailed over the British Isles, whilst over France, under the influence of the anticyclone, the winds were Westerly and North-westerly.

July 2nd–6th.—The depression having passed away to the N.E. the barometer rose generally, the high pressure area extending a little to the N., and on the morning of the 3rd readings were very uniform over the British Isles, the North Sea, and France, whilst a belt of low pressure stretched across Finland and the Gulf of Bothnia. A fall, however, now took place, chiefly in the N. of Great Britain, as a shallow depression passed across the N. of Scotland, and this disturbance was succeeded by another (No. XXXV.), which, following a somewhat similar track, passed across to the Norwegian coast on the 5th. This latter disturbance caused strong South-westerly winds to blow in Scotland, but its passage was followed by a general recovery of pressure over the British Islands, so that on the morning of the 6th the distribution had again become fairly uniform; the rise was, however, of brief duration, and during the day a fresh fall set in.

July 7th–8th.—Two depressions now made their appearance, one lying over the N. of Scotland, the other off the S.W. of Ireland. The former soon disappeared, but the latter advanced in a north-easterly direction, and on the morning of the 8th lay over Scotland; the gradients, however, being everywhere very slight, the winds accompanying it were not strong, and in the course of the day a general recovery of pressure ensued.

July 9th.—The area of high pressure was again established over the Bay of Biscay, but in the N. and W. of the British Islands a slight fall of the barometer occurred, as a large, but not very deep, depression (No. XXXVI.) passed in a north-easterly direction at some distance from the western Scotch coast. This caused strong Southerly and Westerly winds to blow in the N., while over France the winds were more Northerly, and were light in force.

July 10th–16th.—The depression (No. XXXVI.) passed slowly to the N.E. and eventually disappeared over Lapland on the 12th. Meanwhile the recovery of pressure steadily progressed over Great Britain, and the area of highest readings moved northwards, so that on the 12th a large anticyclone, in which readings were high and uniform, lay over Saint George's Channel, England, and Northern France. A slight fall of pressure then took place in the N. of Scotland, owing to a depression which passed in an easterly direction at some distance to the N. of the British Isles; but its influence was not felt very far South, and by the next day it had reached the Gulf of Finland, causing the wind to blow hard from N.W. over Norway, and from S.W. in the Baltic.

Over Great Britain the anticyclone still remained, moving a little further N. till the 15th, when it covered nearly the whole of the British Islands; it was accompanied by very high temperatures in the English Midlands and South-eastern counties, and by light and variable winds generally. On the 16th a small depression approached from the northward, and caused pressure to give way somewhat, especially in Scotland, but the fall soon ceased as the disturbance disappeared over the North Sea. Over Scandinavia, however, strong winds were caused by a deeper disturbance which appeared near the Gulf of Bothnia, but which quickly moved over Northern Russia, and passed out of the area embraced by these remarks.

July 17th–22nd.—The high-pressure area shifted to the W. and took up a new position over S.W. Ireland; it then moved eastward again, so that on the 22nd the area of highest readings lay over the North Sea and Germany. In the meantime pressure had been gradually giving way over the British Islands generally, and in the extreme N. the decrease was for a short time considerable, under the influence of a depression which approached the Scotch coasts from the northward on the 18th. Temperature continued very high over Central England throughout the period.

July 23rd–25th.—A slight depression appeared over Spain and Southern France, moving in a north-easterly direction, and the high pressure area again shifted westward, the barometer rising all over the British Isles. On the 25th the highest readings were once more over S.W. Ireland, and the lowest over the Gulf of Bothnia, where the disturbance from the South had then arrived, but gradients were slight, and the winds were nowhere strong.

July 26th–27th.—A general decrease of pressure now took place over North-western Europe, and the anticyclone moved southwards over the Bay of Biscay and dispersed. Winds over the British Isles were Westerly, and veered to N.W. as two depressions passed Eastward, the one across the North of Ireland and England, and the other to the northward of Scotland. On the 27th a further decrease of pressure commenced in our Islands and over France.

July 28th–31st.—A deep depression (No. XXXVII.) arrived near the Hebrides, and fresh S.W. winds became general over Great Britain, and Westerly winds in Ireland; with the passage of the disturbance a recovery of pressure began in the W., and on the 29th an area of relatively high pressure had again become developed over South western France, but some small disturbances continuing to pass across Great Britain, caused pressure to vary considerably both over the British Isles and France.

August 1st–5th.—Over the Bay of Biscay the high pressure area still continued while a depression (No. XXXVIII.) was passing away along the Norwegian coast; moderate or fresh Westerly winds blew over the British Isles, but over France the winds were light and variable. On the 2nd a very rapid decrease of pressure began at Valencia and quickly became general over Great Britain and France; over the Netherlands, however, pressure continued to increase, and consequently the highest readings were found there, a belt of high pressure stretching eastward across Central Europe. A deep depression (No. XXXIX.) passed over Scotland on the 3rd, and strong Westerly gales blew all over the British Islands; but in the rear of the depression a steady recovery of pressure took place, and on the 4th the highest readings were once more found over South-western France. A small local disturbance, which passed along the Channel during the night of the 4th, caused a slight oscillation of pressure in the neighbourhood of its path, but this was very transitory, and on the 5th and 6th an anticyclone lay over the Channel, the W. of France, and the Bay of Biscay.

August 7th–9th.—The rise of the barometer was temporarily checked by some slight depressions which passed to the northward of Great Britain, and which, without much disturbing the relative distribution of pressure, caused some unsteadiness of the mercury over the British Isles and France during the 7th and 8th.

August 10th–15th.—A fresh recovery of pressure set in and the anticyclone reappeared over Ireland and Saint George's Channel; from thence it moved eastward to the Netherlands and Germany, and another slight decrease of pressure occurred in the W. and S., and later on at the eastern stations also. The distribution of pressure was, however, very uniform, and light winds and very high temperatures were general.

August 16th–19th.—A change in the distribution of pressure now took place. An area of relatively high pressure appeared over Scandinavia, whilst the lowest readings were found to the S.W. of the British Islands, and consequently light or moderate Easterly winds became general over Great Britain. The temperature remained high, and severe storms of thunder and lightning accompanied some slight depressions which reached the Channel coasts from France on the 17th and 19th.

August 20th–25th.—The anticyclone had disappeared from Scandinavia, and the distribution of pressure had again become very uniform over Western Europe. In the N. of Scotland it gave way a little on the 22nd, with the passage across to Norway of a shallow depression (No. XL.), but the changes were very slight, and on the 25th another well-formed area of high pressure lay over the S.W. of Ireland, while over Norway the depression (which had deepened considerably since the 22nd) was filling up and moving away to the N.E. With these conditions moderate Northerly winds were general over Great Britain.

August 26th–28th.—The high pressure area moved Southward to the Bay of Biscay, and a decrease began, which, although most marked in the N., yet quickly extended to most of Western Europe. In the course of the day a well-formed depression crossed the N. of Scotland to the North Sea, causing fresh Westerly winds to blow over the British Isles; this was followed by a brief rise of the barometer on the 27th, and then by another fall, which accompanied a depression (No. XLII.), moving in the same track as its predecessor, and which crossed over Scotland during the latter part of the 28th.

August 29th–31st.—A slight recovery of pressure was in progress in the rear of the disturbance (No. XLII.), whose centre now lay off the N.E. coast of England; light winds were blowing over Scotland, but over England and Ireland fresh Westerly winds were general. At midnight, 29th, another decrease of pressure began at Valencia, and quickly extended eastwards with the approach from the Atlantic of a deep depression (No. XLIII.), whose path lay right across the N. of England; at 6.0 p.m., 30th, the centre of this disturbance was over the Irish Sea, and at 8 a.m. the next day it was not far from Shields. The steepest gradients were in its rear, and consequently the strongest winds were from W. and N.W. By the evening of the 31st the disturbance had reached the North Sea, and strong Northerly and North-westerly winds were general over Great Britain, whilst in Denmark and Norway the winds were Easterly. A general recovery of pressure was then taking place all over the British Islands and France.

September 1st–3rd.—The depression (No. XLIII.) lay over Denmark, and a brisk recovery of pressure was going on all over the British Isles, France, and the Netherlands; as the depression passed away to the N., the rise extended eastward, and continued until the 3rd, by which time pressure had become very uniform over Great Britain, and an area of relatively high pressure had again made its appearance over the Bay of Biscay. A fresh decrease, however, began at Valencia about mid-day of the 3rd, and quickly became general over Great Britain.

September 4th–7th.—The centre of a well-defined depression (No. XLIV.) reached the W. coast of Scotland on the morning of the 4th, and passed over the country during the day, whilst at the same time the high-pressure area was transferred from the Bay of Biscay to over Central Europe. The barometer continued to fall over the British Islands till the 5th, with fresh South-westerly and Westerly winds. A recovery of pressure then set in, and, although the mercury was not quite steady, especially in the S.W., continued till the 7th, by which time the depression had moved away to the N. On the evening of the 5th a small local depression passed along the Channel, and judging from the change of wind recorded by the Yarmouth anemometer, it probably passed over the East Coast at about 9 a.m. next morning.

September 8th–14th.—Pressure was now tolerably steady over the British Isles, although on the whole it continued to increase a little. A shallow depression (No. XLV.), which formed over Denmark during the latter part of the 7th, became deeper, and moving first to the neighbourhood of Stockholm by the 10th, then returned westward to the Norwegian coast, and thence to the North Sea, causing fresh Northerly winds to blow over Great Britain for some days. A slight depression, which showed itself over the Mediterranean on the 14th, passed on to the Continent without much affecting the winds except in the South of France.

September 15th–16th.—Pressure had again become very uniform over the whole of Western Europe, and the region of highest pressure had shifted to over the Gulf of Finland. A smart fall was, however, in progress at Valencia, and a shallow depression reached Saint George's Channel on the 16th, but it soon passed away northwards, and the barometer again rose a little in its rear. A deeper disturbance (No. XLVI.) appeared on the 16th over North Germany, and travelled across to Sweden, causing strong winds to blow in the neighbourhood of its path.

September 17th–22nd.—The depression over Sweden was passing away Northward, and a very general increase of pressure was going on all over Western Europe, an area of relatively high pressure developing itself over South-eastern France. This resulted on the 19th in an anticyclone being formed over France and Southern England, with light Easterly winds on the W. French coast, and light Westerly winds over Northern England. In the N. of Scotland the winds were influenced by the depression over Scandinavia, which had not yet quite disappeared, and were North-westerly and fresh. The rise continued till the 20th, when pressure again gave way very generally. The area of highest readings moved eastwards to Denmark by the 22nd, and the distribution of pressure then became different from anything that had preceded it during the quarter, the isobars running due N. and S.; the lowest pressures lay off the W. coast of Ireland, and a large belt of relatively high pressure stretched from N. to S. over Central Europe.

September 23rd–26th.—The barometer ceased falling over the British Isles during the 23rd; but in the evening a fresh sharp decrease of pressure began at Valencia, and next morning the centre of a deep depression (No. XLVII.) lay off the S.W. coast of Ireland. Simultaneously the winds freshened, and in the afternoon of the 24th, when the centre of the disturbance lay over Central England, a Westerly gale was blowing in the Channel, fresh Southerly winds on the East Coast, light Easterly winds in Scotland, and Northerly winds over Ireland. A recovery of pressure was then in progress, and continued till the 25th, when a fresh fall began in the W. and S.; on the 26th a small depression (No. XLVIII.) reached Saint George's Channel, and travelled eastward over Central England, a slight recovery of pressure taking place in its rear as it moved away.

September 27th–30th.—Gradients were now very slight over Western Europe, the area of least pressure lying over the North Sea. A fresh fall took place in the S.W., on the approach of a depression from the Atlantic, but it did not extend very far North, and the passage of the disturbance over Southern England on the 28th was followed by a general recovery of pressure. On the 30th another decrease occurred at the southern stations, and a fresh deep depression (No. XLIX.) passed eastward along the English Channel, causing a strong Westerly gale to blow on the French coast, and an Easterly gale on the English side. The barometer, though nowhere very high, was highest over Scotland, and the depression which had crossed England on the 28th had now reached Lapland. By the close of the day a general recovery of pressure had commenced over the British Isles.

TABLE OF CYCLONIC SYSTEMS—JULY, 1876.

NATURE OF CHARACTERISTICS OBSERVED.	No. XXXV. July 5-6.	No. XXXVI. July 9-11.	No. XXXVII. July 28-30.
Form	Elongated; major axis lying S.W. and N.E.	Apparently nearly circular	Nearly circular
Size	Large	Large	Large
Depth	Shallow	Shallow	Shallow
Where first Observed	Off the Hebrides	To the N.W. of Scotland	To the N.W. of Scotland
Direction of Motion	Northerly	North-easterly	North-easterly
Rate of Motion	Slow	Slow	Slow
Regions passed over by Steepest Gradients.	Northern part of the British Isles	Northern portion of the British Islands	Scotland and Scandinavia
Termination	Disappeared to the N. of the British Islands.	Disappeared over Lapland	Passed away over Finland
Time under Observation	1 day	2 days	2 days
Accompanying Winds	S.W., veering to W., and reaching the force of a strong gale in Scotland.	Westerly, veering to N.W., strong in Scotland and Northern England and Ireland.	South-westerly, veering to W. and in Scotland to N.W.; strong to a moderate gale.
„ Weather	Generally cloudy or overcast, with slight fall of rain in the W. and N., but clearing as the disturbance passed away.	At first cloudy and overcast, with rain in the North-west; but becoming generally fine later on.	Overcast, with rain, but becoming finer on the 29th.
„ Rainfall	Slight, and confined almost entirely to the Western and Northern stations.	Slight, and limited to the North-western districts.	General, but only slight in amount.
REMARKS	The depression appeared to skirt an area of high pressure existing over South-western Europe. Its centre, however, seems to have been always a good distance to the Westward of the British Isles, and consequently the wind did not veer to the Northward of W., and it was only in the N. that the strength of a gale was attained.	The centre of this depression passed at some distance from our coast, and therefore in the Southern portion of the kingdom the winds were only moderate or fresh in force. Concurrently with the disappearance of the depression an anticyclone was developed over the British Isles and continued for some days.	Small secondary depressions existed over the Baltic and France at the time when this depression arrived off our coasts, but these quickly disappeared. On the 30th the wind was very strong over the Baltic, the gradients being steep in consequence of the proximity of the areas of high and low pressure.

TABLE OF CYCLONIC SYSTEMS—JULY-AUGUST, 1876.

No. XXXVIII. July 30-August 2.	No. XXXIX. August 2-6.	No. XL. August 21-25.	No. XLI. August 26-28.
Circular	Nearly circular	Oval	Oval at first, then nearly circular.
Large	Very large	Large	Very large.
Moderate	Deep	Shallow	Moderate.
Off the W. coast of Scotland	Off the coast of Ireland	Over Scotland	Off the N.W. coast of Scotland.
Northerly	North-easterly	At first north-easterly, then easterly, and then northerly.	South-easterly,
Slow	Moderate	Slow	Slow.
Scotland, the North Sea, and Norway	The Northern portion of the British Isles; the North Sea and Scandinavia,	Scandinavia	The British Islands.
Travelled Northwards out of our area	Disappeared over Lapland	Travelled away over Lapland on the 26th.	Filled up over Denmark.
About 3 days	4 days	About 4½ days	About 1½ days.
A S.W. gale, quickly moderating and veering to N.W.	South-easterly and Southerly, veering to Westerly gales.	Fresh Westerly and North-westerly winds, reaching the force of a gale in the N. of Scotland.	Strong Westerly (S.W. to N.W.), veering to N. and N.E. in Scotland. In Denmark and Norway Southerly and Easterly gales blew.
Squally, overcast, and showery, with local thunderstorms.	Squally and rainy, with lightning in the W., becoming finer as the depression passed away.	Cool weather, showery, with local thunderstorms.	Overcast and showery.
Very general, but moderate in amount; in the W. there were some heavy falls.	General, and in the W. very heavy; elsewhere moderate in amount.	Not very general or heavy	Very slight, except in the extreme N. of Scotland, where it was rather heavy.
On the 31st a subsidiary depression moved South-eastwards from the main disturbance and passed down the North Sea; gradients over Great Britain became in consequence much slighter and the wind in the N. fell light. The secondary had filled up by the next morning, and the larger depression, whose progress had hitherto been very slow, then moved away with greater rapidity.	The centre of this depression passed over Scotland, and the accompanying winds were very strong. On the evening of the 4th a secondary disturbance showed itself over St. George's Channel and travelled eastwards to the Continent during the night, bringing heavy rain to the southern portion of England, but without much affecting the strength of the wind.	This depression on its first appearance was very shallow, but deepened considerably as it moved northwards and the steepest gradients over the British Isles occurred on the 23rd and 24th, when the centre lay on the Norwegian coast near to Christiansund. It then passed eastward towards Russia, the gradients becoming less steep, and finally disappeared on the 27th over Lapland.	The previous depression, No. XL., had reached the Russian shores of the Baltic when this one showed itself off the N.W. of Scotland. An area of high pressure existed at the same time over the Bay of Biscay, and stretched an arm in a north-easterly direction across Central Europe; and this condition continuing, probably prevented the advance of this depression to the eastward.

Table of Cyclonic Systems—August–September, 1876.

NATURE OF CHARACTERISTICS OBSERVED.	No. XLII. **August 28-30.**	No. XLIII. **August 30-September 3.**	No. XLIV. **September 4-7.**
Form	Nearly circular	Varying; at first oval, then circular, and again somewhat oval.	Circular
Size	Large	Large	Large
Depth	Shallow	Moderate	Deep
Where first Observed	Off the Hebrides	Off the N.W. of Ireland	Over the N. of Ireland
Direction of Motion	Easterly, then south-easterly, and then north-easterly.	South-easterly, easterly, and then north-north-easterly.	North-easterly
Rate of Motion	Moderate	Slow	Slow
Regions passed over by steepest Gradients.	Ireland, England, the Netherlands, and Scandinavia.	The British Islands and North Sea	The British Islands, North Sea, and Norway.
Termination	Travelled away northwards	Passed off to the N. of Norway, apparently filling up.	Disappeared to the northward off the coast of Norway.
Time under Observation	About 2½ days	About 4½ days	About 3 days
Accompanying Winds	Strong Westerly winds over England, and Southerly and South-easterly winds over Denmark and Norway. In Scotland the winds were light.	Strong Westerly and North-westerly gales over the southern and western portion of the British Isles; and strong Easterly and Northerly gales over Scotland and the N.E. coast of England.	Strong S.E. and Southerly veering to Westerly winds over England and Ireland, and Easterly backing to Northerly in N. Scotland.
„ **Weather**	Overcast and rainy, with squalls	Squally and rainy, with thunder and lightning in places.	Rainy, squally, and unsettled. Thunderstorms in the S.W.
Rainfall	Very general, and in most places heavy.	Very general, and in the N.W. extremely heavy.	Very general; heaviest in regions traversed by the centre of the disturbance.
REMARKS	This depression arrived off the Hebrides before No. XLI. had disappeared from over Denmark, and at first followed very closely the track which No. XLI. had taken. Whilst over the North Sea, however, it changed its course to northward, and appears to have passed away along the Norwegian coast; a belt of relatively high pressure which existed over Finland having apparently checked its progress in an Easterly direction.	This depression was the third of a series which followed each other in quick succession along a very similar track. Its centre passed eastward across the N. of England, and was accompanied by very strong gales, the steepest gradients being in its rear. On reaching Denmark it, like its immediate predecessor, changed its course to northwards, and moved up over Scandinavia, gradually filling up as it progressed, and apparently skirting the area of relatively high pressure which had for some time existed over Central Europe.	On the evening of the 5th a small secondary depression passed across Southern England to the North Sea. The gradients accompanying the main disturbance were not steep, and it was only in a few places that the wind attained the force of a gale.

TABLE OF CYCLONIC SYSTEMS—SEPTEMBER-OCTOBER, 1876.

No. XLV. September 7-14.	No. XLVI. September 16-19.	No. XLVII. September 24-25.	No. XLVIII. September 26-27.	No. XLIX. September 30-October 1.
Elliptical, but varying a good deal.	Oval	Apparently nearly circular	Oval	Nearly circular.
Large	Large	Large	Large	Large.
Shallow at first, afterwards moderate.	Shallow to moderate	Moderate	Moderate	Moderate.
Over Denmark	Over N. Germany	Off the S.W. of Ireland	Over St. George's Channel	At the mouth of the English Channel.
Irregular; at first north-easterly, then westerly, and then southerly.	Northerly	Easterly	Easterly	Easterly.
Slow	Slow	Slow	Slow	Moderate.
E. of Scotland, the North Sea, and Scandinavia.	Scandinavia	The S. of England	England and Ireland	S. England, and the neighbourhood of the English Channel.
Filled up over the North Sea	Travelled away Northwards	Filled up over N. Germany	Filled up over the Netherlands and N. Germany.	Filled up over Germany.
7 days	About 2½ days	About 1½ days	Nearly 2 days	1 day.
Westerly and North-westerly over England and Ireland, and Northerly over Scotland; becoming generally Northerly on the 13th. The strongest forces were on the 11th and 12th.	Strong North-westerly wind over Norway, but not strong over Great Britain.	Southerly and Westerly gales in the S. of England and Ireland; light or moderate Easterly and Northerly winds in Scotland.	Strong Westerly winds in S. England and Easterly in N. England, backing to N. over Ireland. With the passage of the disturbance the winds became generally Northerly and light.	Very strong Easterly gale over England and Ireland, backing to N. and moderating; along the N. coast of France the gale was strong from S.W., veering to W. and N.W.
Generally overcast and unsettled.	Dull and showery, with thunderstorms in many places.	Overcast, wet, and unsettled	Overcast, gloomy, and wet	Very squally and wet over the greater part of England
General, but not heavy	General, but not heavy in Great Britain.	Very general, and somewhat heavy.	General, but nowhere very heavy.	General over England and the southern half of Ireland, and very heavy near the track of the centre of the depression.
This disturbance was apparently formed over Denmark as a secondary to No. XLIV., and gradually deepened during its progress, which was very slow and erratic. After travelling to the Baltic, it returned to the coast of Norway, where it remained nearly stationary for some hours, and then moved Southwards over the North Sea and rapidly filled up.	Concurrently with the appearance of this depression a shallow disturbance reached the United Kingdom, and travelled northwards along the West Coast, the wind veering from E. to W. during its progress. As it passed away an anticyclone established itself over Great Britain.	An area of high pressure existed over Central Europe during this period, and the depression rapidly filled up as it moved eastwards to the Continent.	As was the case in the preceding depression, the gradients rapidly diminished with the passage of this system, the wind consequently falling light. An area of relatively high pressure continued to hold over Southern and Central Europe, and also over Scandinavia, a zone of lower pressure stretching across the British Isles to the Netherlands and Northern Germany.	The gradients in this depression were very steep, and the wind consequently very strong. Areas of relatively high pressure lay over the S. of France and over Scotland, whilst a disturbance was passing away over Finland. On reaching the Netherlands the depression began to fill up and quickly disappeared, and an anticyclone spread over the whole of Great Britain.

TABLE OF ANTICYCLONIC SYSTEMS—JULY TO AUGUST, 1876.

NATURE OF CHARACTERISTICS OBSERVED.	No. XXI. July 11-17.	No. XXIA. July 20-22.
Form	Oval at first, but becoming irregular later on	Nearly circular
Size	Large	Large
Height	Very small; max. reading 30·45 ins. on 15th	Very small; max. reading 30·3 ins. on 20th
Where first Observed	Over Bay of Biscay and the entrance to English Channel.	Over Great Britain
Direction of Motion	Irregular	Eastwards
Rate of Motion	Very slow	Very slow
Regions passed over	Great Britain and the Netherlands	The British Isles, Netherlands, and N. Germany
Termination	Passed away to the westward	Dispersed
Time under Observation	About 7 days	2½ days
Accompanying Winds	Westerly at first, then variable and light	Light, at first from N.W., then variable
,, **Weather**	Fine generally, and very hot in many parts of England.	Fine and dry, with high temperature over Central England and France.
REMARKS	From the beginning of the month an area of high pressure had existed over the Bay of Biscay, occasionally stretching further N. as far as the Southern portion of the British Islands, but only a comparatively small portion of it came at any time within the area covered by our reports until it developed itself with the general rise of the barometer, which commenced on the 10th.	The centre of the previous system, having shifted to the Westward of Ireland, lay over the Atlantic during the 18th and 19th, it then moved again to the eastward and on the 20th was over the British Isles, and continued to travel across to the Continent, where it finally dispersed over Germany on the 23rd. Another area of high pressure approached our south-western coasts on the 24th, but only a portion of it came under observation, and it soon moved southwards and dispersed.

TABLE OF ANTICYCLONIC SYSTEMS—AUGUST TO SEPTEMBER, 1876.

No. XXII. **August 4-9.**	No. XXIII. **August 10-13.**	No. XXIV. **August 16-19.**	No. XXV. **September 18-23.**
Oval	Oval	At first nearly circular, irregular afterwards.	Irregular.
Large	Large	Large	Large.
Small; maximum readings 30·3 ins. on 7th.	Small; maximum readings, 30·4 ins. on 11th.	Very small; maximum reading 30·3 ins. on the 18th.	Small: maximum reading 30·4 ins. on 20th.
Over S.W. France and Bay of Biscay	Ireland	Sweden	Southern France.
North-eastwards	Eastwards	Southward	Northwards at first, then eastwards.
Slow	Moderate	Very slow	Very slow.
France, the southern half of British Isles, Netherlands, and Denmark.	British Isles, Denmark, and N. Germany.	Scandinavia and Denmark	Western and Central Europe.
Dispersed	Dispersed	Dispersed	Dispersed over Southern Europe.
About 5½ days	About 3 days	3½ days	About 5 days.
Westerly, followed later on by light variable airs.	Chiefly Easterly, but light and variable	Easterly and South-easterly, light	Light; at first Westerly, then Southerly and Easterly in direction.
Generally fine	Very fine, with very high temperature over S. England and France.	Fine in the N., cloudy elsewhere, with thunderstorms in the S. of England.	Generally fine, but dull in the W. and N., with rain in Ireland.
This high-pressure area moved up from the S.W. stretching out an arm or ridge of high pressure over Western Europe. Some shallow depressions skirted along its north-western edge causing fresh winds to blow over Northern Britain, and the system was broken up by a depression which appeared on the 9th.	Following the breaking up of this anticyclone, pressure became very uniform, although not very high, all over Central Europe.	This system was broken up by the advance of a depression which passed across Southern England to the Continent. On the 24th a portion of another area of high pressure came under observation near our S.W. coasts, but it quickly moved Southwards and disappeared over the Bay of Biscay; as, however, only a small portion of it came at any time under observation nothing definite can be said as to its character.	On the 21st a depression approaching from the W. caused the anticyclone to move Eastwards and gradually break up; by the 23rd it had reached Southern Europe and spread out over the Mediterranean, the maximum readings at that time being but very little over 30·0 ins.

NOTES to accompany the TABLE of ANTICYCLONIC SYSTEMS—JULY to SEPTEMBER 1876.

July 1st-10th.—A high-pressure area existed during the greater part of this interval over the Peninsula, occasionally stretching an arm northwards as far as the Channel Coasts, and north-eastwards over France and Germany; but no definite anticyclonic system developed in the area covered by these remarks till the 11th.

July 23rd–August 3rd.—Till July 29th the highest pressures remained to the South-westward of the British Islands, but on the 30th they had moved up over France and Germany, and a belt of high pressure soon stretched right across Central Europe. On August 3rd two areas of maximum readings were shown, one over the Baltic and Finland, the other over the Peninsula; it was the latter which moved northwards next day and ultimately spread over Great Britain.

August 20th–September 17th.—On August 24th a high-pressure area again showed itself to the W. and S.W. of Great Britain, but moved southwards to the Peninsula and Southern Europe. On the 2nd September it extended up to Central Europe, and continued to hold over that region till the 7th, when it gave way on the approach of some depressions from the N.W., and moved back once more to the S. of France and the Peninsula, in which neighbourhood it remained till it moved northwards again on the 18th.

September 23rd–30th.—On the 24th the highest pressures had shifted to South-eastern Europe, and they remained in that region till the end of the month.

TABLES OF GALES.

No. 3. (Cyclonic System No. XXXV.)

Stations.	Velocity 30-40 Miles per Hour.		Velocity Exceeding 40 Miles per Hour.				Velocity Fell below 30 Miles per Hour.		Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity.			Remarks.
	Commenced.	Direction of Wind.	Commenced.	Direction of Wind.	Mean Vel.	Duration in Hours.	Ended.	Direction of Wind.		Hour.	Direction of Wind.	Velocity.	
July 4-6, 1876.													
Sandwick	7 a.m. (5th).	S.E.	—	—	—	—	2 p.m. (5th).	S.W.	7	Noon (5th).	S. by E.	39	—
Alnwick Castle	Noon (5th).	W.S.W.	—	—	—	—	3 p.m. (5th).	W.	3	Noon (5th).	W.S.W.	40	—
	4 p.m. (5th).	W. by S.	—	—	—	—	7 p.m. (5th).	W.S.W.	3	4 p.m. (5th). 5 p.m. (5th).	W. by S. W.S.W.	34 34	
Holyhead	1 a.m. (5th).	S.	—	—	—	—	9 a.m. (5th).	S.W.by S.	8	4 a.m. (5th).	S. by W.	39	—
Valencia	7 p.m. (4th).	S.E. by S.	10 p.m. (4th).	S. by W.	46	4	3 a.m. (5th).	W.S.W.	8	11 p.m. (4th).	S. by W.	51	—

No. 4. (Cyclonic System No. XXXVI.)

Stations.	Velocity 30-40 Miles per Hour.		Velocity Exceeding 40 Miles per Hour.				Velocity Fell below 30 Miles per Hour.		Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity.			Remarks.
	Commenced.	Direction of Wind.	Commenced.	Direction of Wind.	Mean Vel.	Duration in Hours.	Ended.	Direction of Wind.		Hour.	Direction of Wind.	Velocity.	
July 9-12, 1876.													
Sandwick	—	—	5 p.m. (9th).	W.S.W.	45	4	11 p.m. (9th).	W. by S.	6	6 p.m. (9th).	W. by S.	51	—
Glasgow	11 a.m. (9th).	S.W.	—	—	—	—	6 p.m. (9th).	W.	7	2 p.m. (9th).	W.S.W.	36	—
Alnwick Castle	8 a.m. (9th).	S.W. by W.	11 a.m. (9th). 3 p.m. (9th).	S.W.byW. W.S.W.	42 42	1 1	7 p.m. (9th).	W. by S.	11	11 a.m. (9th). 3 p.m. (9th).	S.W.byW. W.S.W.	42 42	—
	Noon (10th).	W.	2 p.m. (10th).	W.S.W.	41	1	4 p.m. (10th).	W.	4	2 p.m. (10th).	W.S.W.	41	
Stonyhurst.	11 a.m. (10th).	W.S.W.	—	—	—	—	1 p.m. (10th).	W.S.W.	2	11 a.m. (10th).	W.S.W.	32	—
Holyhead	6 a.m. (9th).	S.S.W.	—	—	—	—	1 p.m. (9th).	S.W.	7	8 a.m. (9th). 10 a.m. (9th).	S.S.W. S.W. by S.	35 35	Velocity also rose to 32 miles an hour at 10 p.m. 9th, after which it again fell below 30 miles.
Valencia	3 a.m. (9th).	S. by W.	—	—	—	—	7 a.m. (9th).	W. by S.	4	5 a.m. (9th).	S.W. by S.	37	—
Falmouth	10 a.m. (9th).	S.W.byW.	—	—	—	—	1 p.m. (9th).	S.W.byW.	3	11 a.m. (9th).	S.W.byW.	34	—

No. 5. (Cyclonic System, No. XXXIX.)

Stations.	Velocity 30-40 Miles per Hour. Commenced.	Velocity 30-40 Miles per Hour. Direction of Wind.	Velocity Exceeding 40 Miles per Hour. Commenced.	Velocity Exceeding 40 Miles per Hour. Direction of Wind.	Mean Vel.	Duration in Hours.	Velocity Fell below 30 Miles per Hour. Ended.	Velocity Fell below 30 Miles per Hour. Direction of Wind.	Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity. Hour.	Maximum Velocity. Direction of Wind.	Maximum Velocity. Velocity.	Remarks.
Aug. 2-6, 1876.													
Sandwick.	2 a.m. (3rd).	S.E.	7 a.m. (3rd).	S.E. by S.	43	4	2 p.m. (3rd).	S.S.E.	12	9 a.m. (3rd).	S.E. by S.	44	—
	Midt. (3rd).	W. by S.	3 a.m. (4th). 7 a.m. (4th).	W. by S. W. by S.	42 43	3 11	9 p.m. (4th).	W. by S.	21	10 a.m. (4th).	W. by S.	48	
	10 p.m. (4th).	W. by S.	—	—	—	—	7 a.m. (5th).	W. by S.	9	11 p.m. (4th).	W. by S.	36	
Aberdeen.	3 a.m. (3rd).	S.S.E.	7 a.m. (3rd).	S.E. by S.	41	1	10 a.m. (3rd).	S.S.E.	7	7 a.m. (3rd).	S.E. by S.	41	—
Glasgow	2 p.m. (3rd).	W.S.W.	—	—	—	—	5 p.m. (3rd).	W. by S.	3	4 p.m. (3rd).	W. by S.	32	—
	7 p.m. (3rd).	W. by S.	—	—	—	—	9 p.m. (3rd).	W. by S.	2	7 p.m. (3rd).	W. by S.	35	
Alnwick Castle.	1 a.m. (3rd).	S. by E.	—	—	—	—	8 a.m. (3rd).	S. by E.	7	4 a.m. (3rd). 7 a.m. (3rd).	S. by E. S. by E.	34 34	—
	Noon (3rd).	S.W.	1 p.m. (3rd). 4 p.m. (3rd). 8 p.m. (3rd).	S.W. by W. W. by S. W. by S.	46 44 44	2 1 3	1 a.m. (4th).	S.W. by W.	13	2 p.m. (3rd). 9 p.m. (3rd).	W. by S. W. by S.	46 46	
Stonyhurst.	Midt. (2nd).	S.E. by S.	—	—	—	—	8 a.m. (3rd).	S.S.W.	8	2 a.m. (3rd). 4 a.m. (3rd). 6 a.m. (3rd).	S.E. by S. S.E. by S. S.S.E.	38 38 38	Velocity also slightly exceeded 30 miles at 9 a.m., 10 a.m., Noon, 1 p.m. and 2 p.m. 3rd, wind blowing from S.W. by W.
Holyhead.	2 p.m. (2nd).	S. by W.	5 p.m. (2nd). 4 a.m. (3rd).	S. S. by W.	52 45	9 2	11 a.m. (3rd).	W.S.W.	21	11 p.m. (2nd).	S. by E.	64	—
Armagh	6 p.m. (2nd).	S. by E.	—	—	—	—	8 p.m. (2nd).	S. by E.	2	6 p.m. (2nd).	S. by E.	32	—
Valencia	7 a.m. (2nd).	S. by E.	11 a.m. (2nd). 10 p.m. (2nd).	S.S.E. S.S.E.	46 44	6 2	1 a.m. (3rd).	W. by N.	18	1 p.m. (2nd).	S. by E.	53	—
Falmouth.	11 a.m. (2nd).	S. by E.	—	—	—	—	3 p.m. (2nd).	S.	4	1 p.m. (2nd).	S. by E.	34	A velocity of 30 miles was also reached at 4 p.m. and 5 p.m. 2nd.
	7 p.m. (2nd).	S.	—	—	—	—	6 a.m. (3rd).	W. by S.	11	3 a.m. (3rd).	S.S.W.	40	
	10 a.m. (3rd).	W. by S.	—	—	—	—	4 p.m. (3rd).	W.	6	1 p.m. (3rd).	W. by N.	38	
Yarmouth.	11 p.m. (2nd).	S.E. by S.	—	—	—	—	6 a.m. (3rd).	S.	7	1 a.m. (3rd).	S.E. by S.	37	Velocity also slightly exceeded 30 miles an hour at 1 p.m. and 2 p.m. 2nd.
	8 a.m. (3rd).	S. by W.	—	—		—	11 a.m. (3rd).	S.S.W.	3	9 a.m. (3rd).	S.	36	

No. 6. (Cyclonic System, No. XLIII.)

Stations.	Velocity 30-40 Miles per Hour.		Velocity Exceeding 40 Miles per Hour.				Velocity Fell below 30 Miles per Hour.		Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity.			Remarks.
	Commenced.	Direction of Wind.	Commenced.	Direction of Wind.	Mean Vel.	Duration in Hours.	Ended.	Direction of Wind.		Hour.	Direction of Wind.	Velocity.	
Aug. 30–Sept. 3, 1876.													
Seaham -	8 p.m. (31st).	N.	9 p.m. (31st).	N.	43	5	5 a.m. (Sept. 1st).	N.W.byN.	9	10 p.m. (31st).	N.	45	—
Holyhead	6 a.m. (31st).	W. by N.	8 a.m. (31st).	N.W.	55	10	2 a.m. (Sept. 1st).	N.W.	20	9 a.m. (31st).	N.W.byN.	65	—
Valencia.	4 p.m. (30th).	W. by N.	—	—	—	—	9 p.m. (30th).	W.N.W.	5	6 p.m. (30th). 7 p.m. (30th).	W. W.N.W.	35 35	—
	11 p.m. (30th).	W. by N.	—	—	—	—	5 a.m. (31st).	N.W.b.W.	6	2 a.m. (31st).	W.N.W.	37	
Falmouth.	1 p.m. (30th).	S.W.byW.	—	—	—	—	9 p.m. (30th).	W.	8	5 p.m. (30th).	W.S.W.	39	Velocity also slightly exceeded 30 miles at 11 p.m. and Midt. 30th.
	3 a.m. (31st).	W.	7 a.m. (31st). Noon (31st).	W. by N. W.N.W.	47 45	4 6	7 p.m. (31st).	W.	16	10 a.m. (31st).	W.N.W.	52	—

No. 7. (Cyclonic System, No. XLVII.)

Sept. 24-25, 1876.													
Holyhead.	—	—	11 a.m. (24th).	S.S.E.	42	1	1 p.m. (24th).	S. by E.	2	11 a.m. (24th).	S.S.E.	42	—
	Midt. (24th).	W.N.W.	—	—	—	—	6 a.m. (25th).	W. by N.	6	1 a.m. (25th).	W.N.W.	38	
Falmouth.	2 a.m. (24th).	S.E. by S.	—	—	—	—	7 a.m. (24th).	S.S.W.	5	4 a.m. (24th). 5 a.m. (24th).	S. by E. S. by W.	38 38	—
	10 a.m. (24th).	S.S.W.	1 p.m. (24th). 4 p.m. (24th).	S.W. by S. W. by S.	47 48	2 5	10 p.m. (24th).	W.	12	5 p.m. (24th).	W.	51	
Yarmouth	8 a.m. (25th).	W.	—	—	—	—	11 a.m. (25th).	W. by N.	3	8, 9, and 10 a.m. (25th).	W.	32	Velocity also reached 30 miles at 2 and 3 p.m. 24th; wind S. by E.

No. 8. (Cyclonic System, No. XLIX.)

Stations.	Velocity. 30-40 Miles per Hour.		Velocity Exceeding 40 Miles per Hour.				Velocity Fell below 30 Miles per Hour.		Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity.			Remarks.
	Commenced.	Direction of Wind.	Commenced.	Direction of Wind.	Mean Vel.	Duration in Hours.	Ended.	Direction of Wind.		Hour.	Direction of Wind.	Velocity.	
Sept. 30–Oct. 1, 1876.													
Holyhead.	11 p.m. (29th).	E. by S.	Midt. (29th). 4 a.m. (30th). 6 a.m. (30th).	E. E. E.	42 41 45	1 1 23	6 a.m. (Oct. 1st).	N.E. by E.	31	9 and 10 p.m. (30th).	E.N.E.	52	—
Valencia.	6 a.m. (30th).	N.E. by E.	11 a.m. (30th).	N.E.	43	1	3 p.m. (30th).	N.E.	9	11 a.m. (30th).	N.E.	43	Direction pencil out of order from 4 p.m. 30th. Wind probably North-easterly.
	4 p.m. (30th).	N.E. (?)	—	—	—	—	10 p.m. (30th).	N.E. (?)	6	8 p.m. (30th).	N.E. (?)	36	
Falmouth.	2 a.m. (30th).	E.	3 a.m. (30th).	E. by N.	44	3	7 a.m. (30th).	E. by S.	5	5 a.m. (30th).	E. by S.	45	—
	8 a.m. (30th).	E. by S.	—	—	—	—	3 p.m. (30th).	E. by S.	7	1 p.m. (30th).	E. by S.	38	
Yarmouth	9 a.m. (30th).	E. by S	2 p.m. (30th). 1 a.m. (Oct. 1st).	E. E.N.E.	45 52	10 7	11 a.m. (Oct. 1st).	N.N.E.	26	3 a.m. (Oct. 1st).	N.E. by E.	57	—

REMARKS FOR JULY 1876.

Wind.—Moderate South-westerly and Westerly winds were general at the beginning of the month, and continued to blow, with only a few unimportant changes, till the 6th; a retrograde movement then took place in the W., and was followed next day by a similar change in the N., and light Easterly winds blew in those districts for a short time, but the change was only temporary, and by the 8th South-westerly and Westerly winds had again become general, and continued so for some days. Meanwhile, an anticyclone had been approaching the S. of England, and on the 12th Easterly winds set in over the Channel, although further N. the Westerly winds still continued to blow for a day or two longer. With the development of the high-pressure area, however, light variable winds became general until the 17th, when, the centre having moved to the W., a shift to the Northward occurred, and from thence to the 28th. Northerly and Westerly winds were general. On the 28th another change to the Southward took place with the approach of some disturbances from the W., and till the close of the month, Southerly and Westerly winds prevailed, and at times blew with considerable strength. The wind chart for the month shows that on the whole Westerly winds predominated, the stations in the extreme South-west being the only ones where the percentage of Easterly winds equalled that of winds from the opposite quadrant.

Pressure.—The monthly mean isobars show a normal distribution of pressure over the British Islands for the month, the highest mean value, 30·1 ins., extending E. and W. over the S. of England, and the lowest, 29·8 ins., over the Shetland Islands.

The range of pressure was by no means large, the maxima being everywhere below 30·5 ins., and the minima above 29·3 ins.; the former were recorded over the Southern part of England and Ireland on the 12th, and at the stations further N. on the 15th, the centre of an anticyclone lying over Great Britain at that time. The minima were generally reached on the 28th with a shallow depression which passed over the Northern part of the country, but at Valencia the lowest reading was recorded on the 7th, and at Falmouth on the 31st, in both cases in connexion with small disturbances which arrived from the westward.

Movements of Depressions.—Only a few depressions crossed the British Islands or their neighbourhood during the month, and in no case were they accompanied by very steep gradients. The centres of the first series passed generally to the northward of Scotland, but an exception occurred on the 7th, when a shallow subsidiary depression reached the Irish Coast, and moved in a north-easterly direction to Northern England and S. Scotland. Near the middle of the month an area of high pressure became established over England and Ireland, with light anticyclonic winds; and, with some slight variations, these conditions continued till the 26th, when another series of depressions arrived off the northern Coasts, travelling in a north-easterly direction in a very similar track to that followed by those observed in the earlier part of the month.

Temperature.—The mean temperature of the month, corrected for height above the sea level, was considerably above the average over the greater part of the kingdom, ranging from 67° over the S.E. of England to 53° at the Shetland Islands; in the S.E. of Ireland it was 63°, decreasing to 58° on the N.W. Irish Coast. The range of temperature was large, and at some of the English stations amounted to 50°, but generally the difference between the maximum and minimum was less than this, and at most stations did not greatly exceed 40°. The maxima were high, and temperatures above 90° were recorded at several stations; the highest reading was 95°·1, recorded at Churchstoke on the 16th, the day on which the maxima of the month were most generally reached. The minima occurred most generally on the morning of the 12th, but at Buxton the reading was as low as 38° on the 3rd; at Markree 35°·7 on the 25th; and at Glenalmond 37°·4 on the 3rd; these appear, however, to have been exceptionally low, and as a rule the minima were above 40°, and at many of the stations on the E., S., and W. English coasts above 50°.

Vapour Tension.—The tension of vapour ranged from 0·5 in. to 0·38 in., and, speaking generally, decreased northwards from the S. Coast of England, where it was greatest, to the N.E. Coast of Scotland, where the lowest mean values were found. The distribution of Relative Humidity, on the other hand, was apparently governed by the proximity of the sea, and was therefore least over the Midland districts and greatest at stations near the coasts.

Rainfall.—The fall of rain was tolerably uniform over the whole kingdom, and was generally below the average, the amounts recorded in the S.E. of England being especially small. Heavy falls occurred in the N.W. on the 26th, amounting at Holyhead to 1·93 in. and at Llandudno to 1·59 in. in the 24 hours.

TABLE A., JULY.—SHOWING the MEAN and EXTREME PRESSURES and TEMPERATURES recorded at each of the SEVEN SELF-RECORDING OBSERVATORIES of the METEOROLOGICAL OFFICE during the Month of JULY, 1876, together with the MONTHLY VAPOUR TENSION, the RELATIVE HUMIDITY, and TOTAL RAINFALL.

NAMES OF OBSERVATORIES.	PRESSURE at 32° F. and the Mean Sea Level (In English Inches).						TEMPERATURE In the Shade (In Degrees Fahrenheit).						HYGROMETRIC VALUES.		RAINFALL (In English Inches).
	Mean for the Month.	Extremes.				Range.	Mean for the Month.	Extremes.				Range.	Tension of Vapour (In English Inches.)	Relative Humidity (Saturation = 100.)	
		Minimum.		Maximum.				Minimum.		Maximum.					
		Reading.	Date.	Reading.	Date.			Reading.	Date.	Reading.	Date.				
Valencia - -	ins. 30·097	ins. 29·537	D. H. 7th, 6 p.m.	ins. 30·440	D. H. 12th, 10 p.m.	ins. ·903	° 59·8	° 46·2	D. H. 27th, 5 a.m.	° 79·5	D. H. 15th, 4 p.m.	° 33·3	in. ·406	% 79	ins. 2·699
Armagh - -	30·039	·482	28th, 7 a.m.	·466	15th, 1 a.m.	·984	59·4	45·2	27th, 5 a.m.	84·3	16th, 1 p.m.	39·1	·389	77	2·044
Glasgow - -	29·958	·373	28th, 11 a.m.	·437	15th, 7 a.m.	1·064	57·8	43·0	10th, 5 a.m.	80·8	16th, 3 p.m.	37·8	·367	77	2·090
Aberdeen - -	29·923*	·307	28th, 4 p.m.	·441	15th, 10 a.m.	1·134	58·1	43·6	3rd, 4 a.m.	84·9	16th, 4 p.m.	41·3	·354	73	1·585
Falmouth - -	30·134	·718	31st, 7 a.m.	·474	12th, 2 p.m.	·756	62·9	50·6	12th, 4 a.m. } 5 a.m. }	80·0	17th, 2 p.m.	29·4	·441	77	1·150
Stonyhurst -	·033	·468	28th, Noon	·457	15th, 6 a.m. } 7 a.m. }	·989	60·8	45·9	12th, 2 a.m.	84·0	16th 1 p.m.	38·1	·467	77	5·234
Kew - -	30·083	29·607	28th, 6 p.m.	30·454	12th, 8 a.m. } 9 a.m. }	·847	65·8	47·0	12th, 4 a.m.	88·5	15th, 4 p.m.	41·5	·431	68	0·911

* The Mean for one day is approximate.

TABLE B., JULY.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at
The values are not
(The Stations are grouped in Districts, and then arranged in order of Latitude,

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 9 a.m. and 9 p.m.	AIR TEMPERATURE.									
			At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Means of			Absolute Extremes.			
						Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.
		ins.	°	°	°	°	°	°	°		°	
0. SCOTLAND, N.	Sandwick Manse (Orkneys)	29·853	54·5	52·7	53·6	49·9	59·0	54·5	42·8	27th	76·0	16th
1. SCOTLAND, E.	Glenalmond	29·957	57·4	55·6	56·5	48·8	66·4	5 ·5	·4	3rd	80·3	16th
2. ENGLAND, N.E.	Seaham	29·996	62·8	58·3	60·6	52·4	69·5	61·0	44·8	12th	91·2	16th
	Durham*	29·980	65·1	56·6	60·9	50·4	73·3	61·9	43·2	3rd	92·5	16th
	Hull	30·034	64·9	61·0	63·0	54·9	73·2	64·1	46·0	12th	89·5	16th
	Kelstern (Calcethorpe)	30·047	62·5	58·1	60·3	52·4	70·7	61·6	43·6	12th	83·2	14th
3. ENGLAND, E.	Hillington	30·033	66·0	60·4	63·2	52·5	74·8	63·7	43·0	18th	89·1	14th
	Audley End	30·080	66·8	61·8	64·3	53·7	75·4	64·6	42·3	12th	87·0	16th
	Chigwell Row	30·120	65·0	63·5	64·3	55·7	73·8	64·8	47·8	12th	86·5	15th
4. MIDLAND COUNTIES.	Buxton	30·060	61·3	56·5	58·9	49·5	68·9	59·2	38·0	3rd	88·9	16th
	Cheadle	30·068	60·5	58·2	59·4	52·1	69·2	60·7	42·7	12th	84·8	15th, 16th
	Leicester	30·056	65·1	65·0	65·1	55·0	74·0	64·5	43·7	12th	87·9	16th
	Uppingham	30·052	65·9	60·9	63·4	53·5	75·9	64·7	44·3	12th	90·2	15th
	Oscott	30·064	63·4	60·8	62·1	53·7	73·4	63·6	44·3	12th	90·9	16th
	Churchstoke	30·093	61·9	57·5	59·7	51·1	72·2	61·7	45·0	1st, 3rd	95·1	16th
	Hereford	30·090	65·4	62·0	63·7	53·9	75·0	64·5	44·1	12th	89·3	15th
5. ENGLAND, S.	Marlborough	30·104	67·1	62·1	64·6	54·6	75·9	65·3	48·8	29th	90·7	15th
	Strathfield Turgiss	30·102	67·5	62·2	64·9	54·0	77·0	65·5	42·1	12th	91·3	15th
	Ramsgate	30·103	66·4	61·5	64·0	57·5	72·1	64·8	49·7	11th	85·9	17th
	Folkestone	30·091	64·8	59·7	62·3	55·7	70·2	63·0	48·3	12th	78·3	23rd
	Hastings	30·104	65·3	60·3	62·8	55·8	70·4	63·1	49·5	12th	81·2	17th
6. SCOTLAND, W.	——	—	—	—	—	—	—	—	—	—	—	—
7. ENGLAND, N.W.	Hawes	30·037	61·0	55·9	58·5	49·6	67·5	58·6	38·3	3rd	85·4	15th
	Llandudno	30·054	63·5	59·2	61·3	54·9	70·8	62·9	48·9	18th	86·6	16th
8. ENGLAND, S.W.	Caermarthen	30·075	65·0	58·7	61·9	53·9	71·7	62·8	42·2	12th	88·7	15th
	Dartmoor	30·223	62·0	55·9	59·0	52·2	66·4	59·3	42·5	31st	81·0	16th
9. IRELAND, N.	Markree Castle	30·035	58·8	56·0	57·4	49·3	66·9	58·1	35·7	25th	85·2	15th
10. IRELAND, S.	Dublin	30·067	63·0	60·8	61·9	54·4	69·8	62·1	46·0	27th	87·2	16th
	Parsonstown	30·077	62·0	58·6	60·3	53·1	70·6	61·9	41·8	12th	89·1	15th
CHANNEL	Jersey (St. Aubins)	30·174	67·1	62·0	64·6	57·8	73·1	65·5	51·0	28th	86·0	17th

* At Durham the observations were taken at 10 a.m. and 10 p.m. each day.

STATIONS of the SECOND ORDER in the BRITISH ISLANDS, during the Month of JULY, 1876.
corrected for Diurnal Range.
beginning in each case with the Station lying furthest North.)

TENSION OF VAPOUR.			RELATIVE HUMIDITY.			AMOUNT OF CLOUD (0 to 10).			RAINFALL.			WEATHER. No. of Days of							WIND. No. of Observations of								
At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
in.	in.	in.	%	%	%				ins.	ins.																	
·352	·344	·348	82	87	85	7·2	6·7	7·0	3·150	·880	17th	24	0	0	1	3	12	2	1	0	1	2	6	11	28	8	5
·367	·371	·369	78	83	80	7·3	7·0	7·2	1·360	·340	7th	15	0	0	1	2	13	0	1	1	1	3	7	14	19	8	8
·434	·423	·429	76	86	81	6·4	4·5	5·5	2·720	·680	23rd	13	0	0	1	5	7	0	5	1	0	0	10	10	11	3	22
·436	·398	·417	70	87	79	6·5	5·4	6·0	2·900	·746	31st	9	0	0	1	3	6	0	4	4	0	2	9	14	10	6	13
·470	·433	·452	77	81	79	6·6	4·6	5·6	2·200	·530	26th	11	0	0	6	4	6	0	2	7	5	4	1	17	17	7	2
·470	·423	·447	83	87	85	6·8	5·5	6·2	1·659	·666	22nd	13	0	0	5	3	10	0	3	4	2	1	4	20	13	9	6
·477	·469	·473	75	89	82	6·9	6·4	6·7	3·612	1·100	22nd	11	0	0	5	1	8	0	4	10	4	3	1	19	9	10	2
·428	·443	·435	65	80	73	5·9	5·2	5·6	1·110	·410	31st	12	0	0	4	3	8	0	4	1	0	1	3	13	8	17	15
·424	·428	·426	69	73	71	6·5	5·6	6·1	0·970	·360	23rd	5	0	0	1	4	11	0	6	5	4	3	7	13	11	7	6
·395	·379	·387	73	83	78	7·0	6·7	6·9	2·610	·700	26th	15	0	1	1	0	10	0	5	1	1	1	1	15	11	27	0
·400	·384	·392	76	79	78	6·5	4·3	5·4	2·410	·690	6th	15	0	0	4	6	8	0	6	0	0	4	2	13	5	20	12
·409	·424	·417	67	69	68	6·7	5·6	6·2	0·710	·250	6th	9	0	0	3	3	10	1	2	3	1	0	7	17	18	9	5
·493	·443	·468	77	83	80	6·1	6·7	6·4	0·583	·231	6th	7	0	0	1	2	7	2	7	0	1	2	3	19	9	14	7
·434	·431	·433	74	80	77	7·1	5·5	6·3	1·380	·390	6th	11	0	0	3	3	10	0	5	3	1	2	8	20	6	17	0
·417	·375	·396	75	79	77	4·1	5·0	4·6	2·111	·570	31st	10	0	0	0	1	1	4	6	6	0	0	1	14	8	12	15
·425	·427	·426	68	76	72	6·1	5·1	5·6	0·801	·230	6th	8	0	0	0	2	7	0	0†	0	0	0	3	7	11	2	7†
·477	·470	·473	72	84	78	5·9	4·6	5·2	0·879	·314	31st	8	0	0	1	5	7	0	2	2	0	1	3	6	8	8	32
·457	·481	·469	68	85	77	5·3	4·8	5·1	1·281	·462	8th	6	0	0	0	7	5	0	10	1	3	5	2	12	11	13	5
·487	·480	·484	75	88	82	6·6	5·4	6·0	0·375	·170	2nd	5	0	0	4	5	8	6	10	4	12	4	11	11	6	1	3
·459	·443	·451	76	77	77	5·6	5·5	5·6	0·610	·190	17th	6	0	1	2	5	7	0	4	0	11	2	4	14	14	4	9
·454	·436	·445	74	84	79	5·8	4·9	5·4	0·440	·255	31st	8	0	0	1	9	10	3	6	7	6	3	5	16	14	3	2
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
·401	·379	·390	75	84	80	7·0	6·1	6·6	3·000	·670	31st	15	0	0	1	3	12	0	1	1	2	2	0	11	24	8	13
·422	·377	·399	72	75	73	7·0	5·7	6·4	2·277	1·590	26th	8	0	0	0	5	14	0	8	1	4	0	1	8	34	6	0
·483	·448	·466	78	90	84	6·2	4·0	5·1	3·280	1·070	6th	10	0	1	0	7	10	0	8	0	0	1	0	16	6	5	26
·424	·395	·410	78	88	83	5·5	4·7	5·1	4·190	·960	6th	15	0	0	0	12	11	1	8	1	4	0	1	5	19	6	18
·389	·381	·385	78	84	81	9·0	7·2	8·1	1·924	·540	25th	21	0	0	0	1	20	0	4	4	2	10	16	6	6	7	7
·394	·405	·400	68	76	72	5·6	5·2	5·4	1·337	·679	26th	10	0	0	0	3	3	0	2	1	7	5	3	6	23	10	5
·395	·397	·396	71	80	76	7·2	6·6	6·9	1·699	·750	26th	10	0	0	0	1	11	0	3	1	0	7	4	10	14	16	7
·464	·440	·452	71	80	76	5·1	4·6	4·9	0·655	·172	30th	12	0	1	1	12	10	0	6	11	5	0	1	14	12	6	7

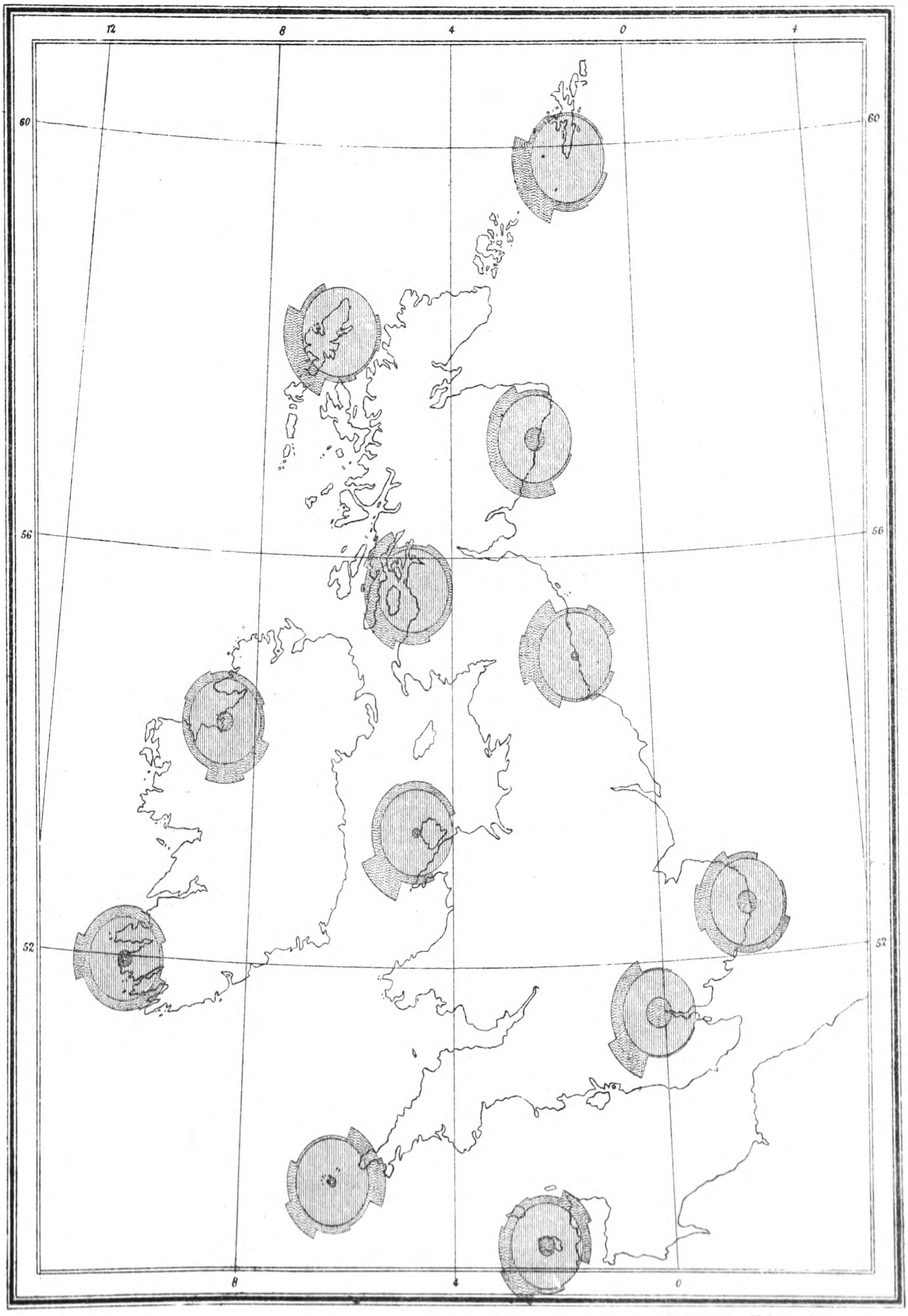
† Hereford, July. 32 observations of wind lost.

TABLE C., JULY.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC REPORTING STATIONS in the BRITISH ISLANDS during the month of JULY, 1876. Observations are made at 8 a.m. daily.

(The Stations are grouped in Districts, and then arranged in order of Latitude, beginning in each case with the Station lying furthest North.)

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	AIR TEMPERATURE.								TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.			WEATHER, No. of Days of							WIND, No. of Observations of								
				Means of			Absolute Extremes.																									
			At 8 a.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.				Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
		ins.	°	°	°	°	°		°		in.	%		ins.	ins.																	
0. SCOTLAND, N.	Sumburgh Head	29·802	52·7	48·0	57·4	52·7	43	1st, 12th	63	16th	·351	88	8·4	3·07	0·67	31st	29	0	0	0	2	20	0	1	1	0	2	4	11	10	2	0
	Stornoway	29·857	55·5	49·5	61·1	55·3	42	7th, 27th	71	16th	·389	88	8·5	1·92	0·22	18th	27	0	0	0	2	22	9	0	0	2	1	2	11	11	3	1
	Thurso	29·851	55·6	49·0	64·5	56·8	43	5th	86	16th	·367	82	7·9	3·10	0·64	22nd	29	0	0	0	2	18	1	1	0	1	1	5	5	6	6	6
	Wick	29·861	55·8	49·0	63·2	56·1	41	27th	81	16th	·372	83	6·9	2·28	0·54	18th	16	0	0	0	6	17	2	1	0	2	4	6	5	6	6	1
1. SCOTLAND, E.	Nairn	29·899	57·5	51·3	67·0	59·2	43	3rd	86	16th	·360	76	6·3	1·56	0·59	22nd	15	0	0	0	5	11	1	0	0	0	0	2	13	8	2	6
	Aberdeen	29·904	58·7	52·4	67·0	59·7	44	3rd	86	16th	·358	73	7·1	1·56	0·68	22nd	13	0	0	0	4	13	0	2	0	0	1	6	6	5	6	5
	Leith	29·954	59·8	52·1	70·7	61·4	45	3rd, 10th	90	16th	·406	79	5·7	1·75	0·37	22nd	13	0	0	0	3	7	1	2	2	3	0	0	6	12	6	0
2. ENGLAND, N.E.	Shields	30·003	60·2	53·8	66·5	60·2	48	12th	85	16th	·409	79	6·2	2·77	0·65	23rd	13	0	0	0	8	14	4	2	4	0	2	1	4	9	8	1
	Scarborough	30·006	63·3	56·0	69·4	62·7	50	27th	78	16th	·448	77	5·4	2·31	0·79	26th	10	0	0	0	9	9	0	7	0	0	0	6	8	6	4	0
	York	30·029	61·4	53·5	72·6	63·1	42	3rd	88	16th	·435	80	6·0	2·00	0·73	26th	10	0	0	0	10	15	1	6	0	0	1	7	5	6	6	0
3. ENGLAND, E.	Yarmouth	30·061	62·7	57·1	69·1	63·1	53	29th, 30th	80	26th	·453	79	5·2	2·17	0·55	8th, 23rd	9	0	0	1	10	9	0	2	0	1	3	2	6	7	6	4
	Cambridge	30·062	64·3	54·6	78·3	66·5	44	12th	91	15th, 16th	·448	75	5·9	1·50	0·47	31st	10	0	0	1	9	10	0	4	0	1	1	6	10	5	4	0
4. MIDLAND COUNTIES.	Nottingham	30·067	65·3	53·9	78·2	66·1	40	12th	94	16th	·468	75	5·4	1·36	0·38	6th	8	0	0	0	12	11	1	1	1	0	0	11	9	5	4	0
	Oxford	30·070	63·4	56·2	76·1	66·2	44	12th	90	16th	·435	75	5·9	0·85	0·34	6th	9	0	0	0	9	11	0	0	0	1	0	3	7	4	7	9
5. ENGLAND, S.	London	30·091	65·3	55·8	78·5	67·2	44	12th	92	15th, 16th	·452	73	5·5	0·80	0·30	28th	6	0	0	0	12	11	0	1	0	0	1	1	11	5	5	7
	Dover	30·085	64·6	58·8	69·0	63·9	54	11th, 29th	76	23rd	·459	76	3·4	0·26	0·10	31st	6	0	0	0	15	1	0	3	5	1	1	1	10	6	3	1
	Hurst Castle	30·099	63·7	57·2	69·3	63·3	51	11th	84	19th	·499	85	4·3	0·57	0·28	6th	7	0	0	0	15	7	1	4	4	3	0	1	3	9	3	4
6. SCOTLAND, W.	Ardrossan	29·987	57·7	53·5	64·4	59·0	46	3rd	76	16th	·383	79	6·9	2·83	0·70	30th	16	0	0	0	4	12	2	1	2	1	2	4	7	5	9	0
7. ENGLAND, N.W.	Liverpool	30·043	61·5	55·8	67·9	61·9	50	3rd, 28th	85	16th	·389	71	6·3	2·34	1·04	26th	9	0	0	0	7	11	1	0	0	1	4	2	7	11	6	0
	Holyhead	30·053	58·5	54·7	66·1	60·4	47	31st	79	16th	·423	86	6·3	2·98	1·93	26th	11	0	0	0	6	9	0	3	2	0	0	3	14	4	4	1
8. ENGLAND, S.W.	Pembroke	30·093	60·0	56·1	66·0	61·1	49	12th	79	15th	·429	83	5·0	2·06	0·37	26th	11	0	0	0	14	11	0	5	2	3	0	2	5	5	4	5
	Portishead	30·091	63·7	56·8	74·1	65·5	50	12th	86	15th, 16th	·490	83	6·3	1·25	0·44	6th	8	0	0	0	5	10	3	4	2	0	0	0	9	9	5	2
	Plymouth	30·118	64·3	57·6	72·2	64·9	46	12th	84	16th	·485	81	4·9	1·25	0·75	6th	9	0	0	0	15	13	1	4	0	6	0	1	5	6	3	6
9. IRELAND, N.	Greencastle	29·972	57·1	49·3	66·3	57·8	41	27th	81	15th, 16th	·387	82	8·0	2·93	0·66	30th	16	0	0	0	4	21	0	4	0	1	1	3	7	10	5	0
	Donaghadee	30·008	58·3	52·4	64·9	58·7	46	18th, 25th	81	16th	·414	84	6·3	1·35	0·39	30th	12	0	0	0	5	10	1	2	3	1	3	1	5	10	6	0
10. IRELAND, S.	Kingstown	30·060	60·5	56·2	68·7	62·5	49	27th	85	16th	·400	76	5·0	0·82	0·46	26th	9	0	0	0	8	2	0	3	1	1	3	2	3	11	7	0
	Roche's Point	30·100	60·8	54·8	71·1	63·0	49	27th	84	16th	·413	78	5·2	2·42	0·68	26th	8	0	0	0	10	5	0	10	1	2	3	2	3	3	7	0
	Valencia	30·087	59·1	53·8	65·5	59·7	44	27th	78	15th	·398	79	7·1	2·35	0·48	26th, 30th	14	0	0	0	4	13	0	4	3	1	4	3	3	7	4	2
CHANNEL	Scilly (St. Mary's)	30·132	62·3	57·9	66·6	62·3	51	5th	74	22nd	·507	91	6·4	1·07	0·37	6th	12	0	0	0	8	14	0	1	5	7	2	3	7	4	1	1

MONTHLY WIND CHART — JULY 1876.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60
56
56
52
52
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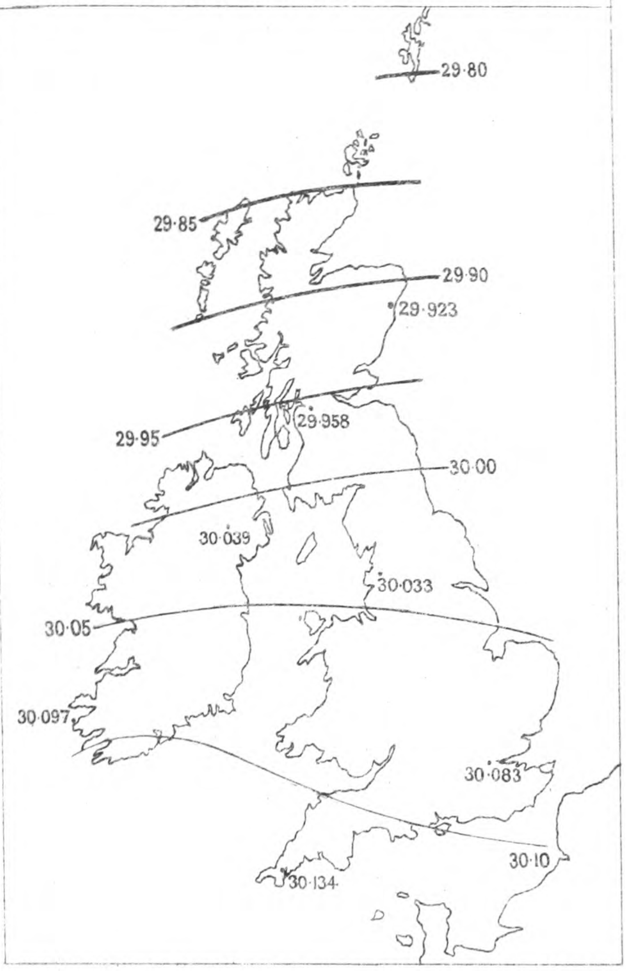
DANGERFIELD, LITH. 22 BEDFORD ST COVENT GARDEN.7228.

MONTHLY WEATHER CHART - JULY 1876.

1. DISTRIBUTION OF MEAN PRESSURE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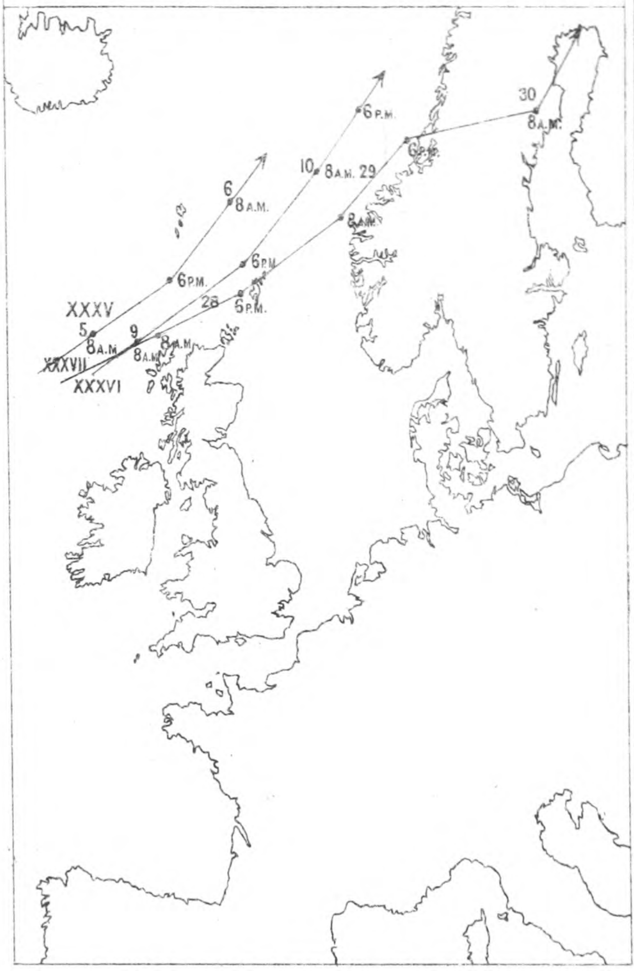
30·10
30·134

2. MOVEMENTS OF DEPRESSIONS.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6P.M.
10
8A.M. 29
6
8A.M.
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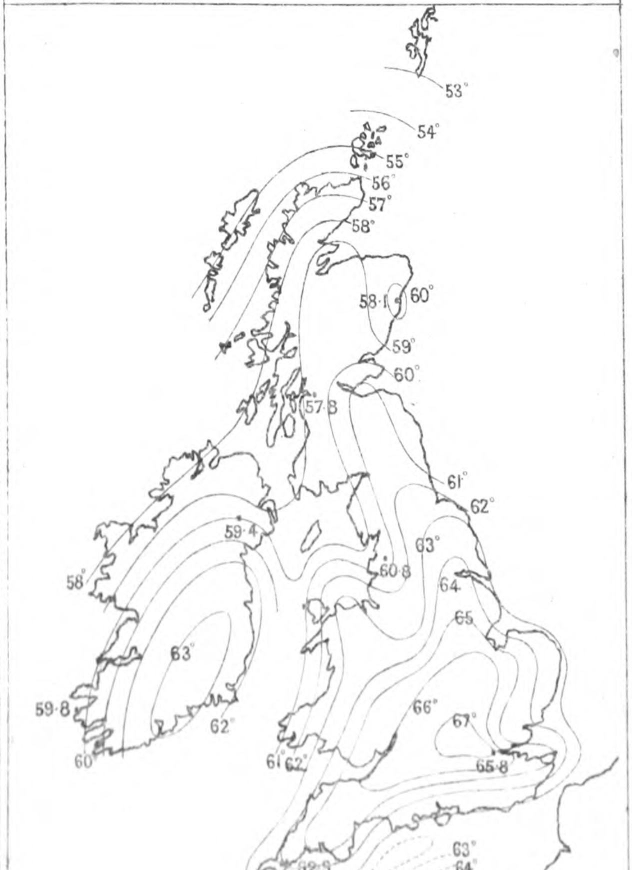
6P.M.
6P.M.
28
6P.M.
XXXV
5
8A.M.
9
8A.M.
8A.M.
XXXVII
XXXVI

3. DISTRIBUTION OF MEAN TEMPERATURE.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64
65
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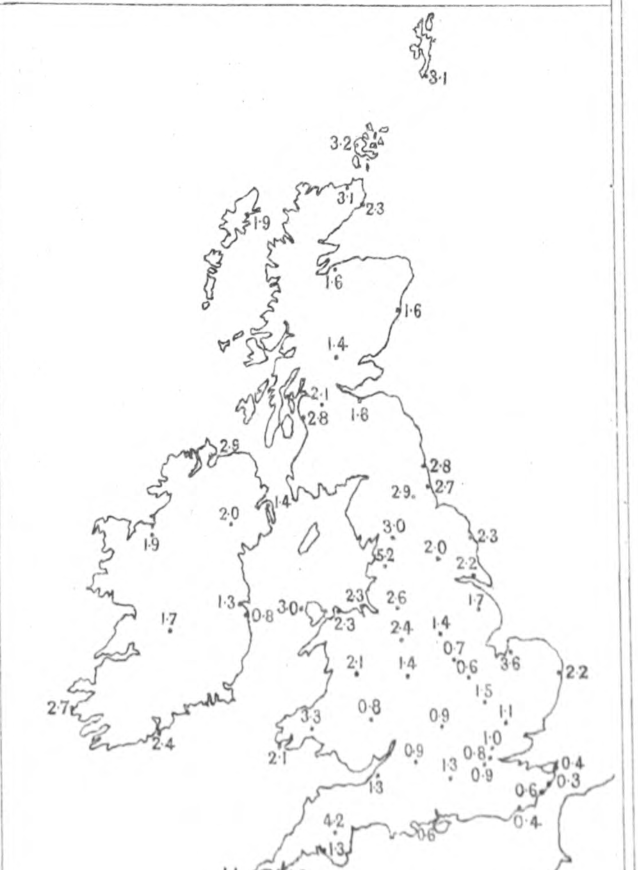
63°
64°
65°
66°
62·3
62°

4. RAINFALL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0·7

To follow Wind Chart for July

DANGERFIELD LITH 22 BEDFORD S. COVENT GARDEN
7227

REMARKS FOR AUGUST 1876.

Wind.—August opened with fresh Westerly winds, which backed to S. and S.E. on the 2nd, and then veered again on the 3rd, and blew a gale from W. and N.W., with the passage of a depression over the N. of Scotland. The wind then moderated, and continued to blow from between W. and S. until the 9th, when a pretty general shift to the northward took place, and on the 10th the winds were Westerly over the northern portion of the kingdom, Northerly on the E. Coast, and N.E. on the S.W. Coasts. The wind then gradually became Easterly and South-easterly all over the British Islands, and continued to blow from that direction with moderate force till the 19th. On the 20th it backed to N.E., with the advance of a depression over the S.W. Coast, and by the 22nd it had become once more North-westerly. Another change to N. then occurred, and the wind continued to blow from that quarter till the 25th, when a fresh backing began, and on the 26th Westerly and South-westerly winds prevailed in consequence of a depression which lay to the North of Scotland; but as this disturbance moved away the wind again veered and continued to blow from N.W. throughout the 27th. On the 28th the general direction of the wind was Westerly, and, with the exception of some strong Easterly and North-easterly winds which blew over Scotland (on the northern side of depression No. XXVII.) during the 30th and 31st, this continued to be the prevailing direction till the end of the month.

Pressure.—The mean pressure decreased pretty regularly from South to North, the difference between the mean over the southern portion of the kingdom and that near the Shetland Islands amounting to 0·2 inch. The maximum readings, which were everywhere below 30·4 inches, were generally recorded on the 10th, but exceptions to this occurred at Falmouth and Aberdeen, where the highest point was reached on the 6th and 12th respectively. The minima over England were recorded in connexion with depression No. XXVII., which crossed over the country on the 31st; but in Ireland and Scotland the lowest points were reached during the night of the 2nd and morning of the 3rd, during the passage of depression No. XIX. The minima recorded this month were the lowest during the quarter.

Movements of Depressions.—The depressions were not very numerous or deep. Those at the commencement of the month passed to the N.E. over the northern portion of the kingdom, while later on, in the middle of the month, some very shallow disturbances reached the South-west coast, and remained there nearly stationary for some time. On the 23rd another series passed to the northward of our coasts, and on the 26th and 27th a depression arrived off the Scotch coast from the N.W., moving in a south-easterly direction. The depression which reached us on the 30th took an easterly course across the North of England.

A high pressure area moved northward from the Bay of Biscay on the 5th and continued over Great Britain and Western Europe till the 13th, when it disappeared for a couple of days and re-appeared over Scandinavia on the 16th, it then gradually dispersed and finally disappeared on the 19th.

Temperature.—The mean temperature, corrected for height above sea level, varied from a little below 66° in the S.E. of England to a little above 55° in the N. of Scotland, and exceeded 60° over nearly the whole of England and Wales, the Southern part of Scotland, and the Southern half of Ireland. The range of temperature was very large over the Midland and South-eastern counties of England, where, owing to the very high maxima registered during the middle of the month, it considerably exceeded 50°; but in the Western and Northern parts of the kingdom the range was much less, and was generally between 30° and 40°. The lowest readings occurred in most districts on the 25th and 26th, but in the North of Scotland they were recorded on the 28th and 29th, and in the N.W. of England and near St. George's Channel on the 31st. The highest readings were generally registered during the prevalence of the anticyclone over Western Europe in the middle of the month,—at most places on the 13th or 14th; 96° was the maximum in London on the 13th, and 97° at Uppingham and 96° at Nottingham on the 14th.

Vapour Tension.—Vapour tension was greatest over the southern coast of England and lowest over the N. and E. of Scotland; while Relative Humidity was least over both Central England and the N.E. of Scotland, and greatest in the S.W. of England and Wales.

Rainfall.—The largest amounts reported fell at the south-western and north-western stations, and in places the fall considerably exceeded the average for the month; but over the Eastern and Midland Counties of England and the N. and E. of Scotland the fall did not exceed, and was in many cases below, the average. Very heavy falls, exceeding 2 inches in the 24 hours, occurred at Portishead and Ardrossan on the 19th and 30th respectively; and falls exceeding an inch in the 24 hours were registered at several stations, chiefly, but not exclusively, in the northern and western parts of the kingdom.

TABLE A., AUGUST.—SHOWING the MEAN and EXTREME PRESSURES and TEMPERATURES recorded at each of the SEVEN SELF-RECORDING OBSERVATORIES of the METEOROLOGICAL OFFICE during the Month of AUGUST, 1876; together with the MONTHLY VAPOUR TENSION, the RELATIVE HUMIDITY, and TOTAL RAINFALL.

NAMES OF OBSERVATORIES.	PRESSURE at 32° F. and the Mean Sea Level (In English Inches).						TEMPERATURE In the Shade (In Degrees Fahrenheit).						HYGROMETRIC VALUES.		RAINFALL (In English Inches).
	Mean for the Month.	Extremes.				Range.	Mean for the Month.	Extremes.				Range.	Tension of Vapour (In English Inches).	Relative Humidity (Saturation = 100).	
		Minimum.		Maximum.				Minimum.		Maximum.					
		Reading.	Date.	Reading.	Date.			Reading.	Date.	Reading.	Date.				
	ins.	ins.	D. H.	ins.	D. H.	ins.	°	°	D. H.	°	D. H.	°	in.	°/°	ins.
Valencia - -	29·944	29·064	2nd, Midt.	30·358	10th, 10 a.m.	1·294	60·2	48·0	25th, 6 a.m.	78·5	12th, 4 p.m.	30·5	·417	80	4·984
Armagh - -	·908	29·008	3rd, 5 a.m.	·323	10th, Noon 10 p.m.	1·315	58·1	42·8	25th, 1 a.m.	76·7	14th, 2 p.m.	33·9	·389	80	2·705
Glasgow - -	·853	28·992	3rd, 9 a.m.	·280	10th, 10 p.m.	1·288	57·7	39·0	25th, 4 a.m.	81·3	14th, 4 p.m.	42·3	·368	77	4·680
Aberdeen - -	·854	28·988	3rd, 2 p.m.	·213	12th, 8 a.m.	1·225	55·9	39·4	28th, 3 a.m.	73·5	11th, 3 p.m.	34·1	·354	79	1·800
Falmouth - -	·989	29·341	31st, 7 a.m.	·347	6th, 7 a.m.	1·006	61·4	51·0	31st, 6 a.m.	74·3	13th, 2 p.m.	23·3	·446	82	5·150
Stonyhurst - -	·903	28·964	31st, 9 a.m.	·368	10th, 10 p.m.	1·404	59·2	40·6	24th, 5 a.m.	82·4	13th, 4 p.m.	41·8	·389	77	4·294
Kew - -	29·946	29·126	31st, 2 p.m.	30·371	11th, 8 a.m.	1·245	63·3	44·1	26th, 2 a.m.	92·3	13th, 2 p.m.	48·2	·405	70	1·935

TABLE B., AUGUST.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at
The values are not

(The Stations are grouped in Districts, and then arranged in order of

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit, and Mean Sea Level) from Observations made at 9 a.m. and 9 p.m.	AIR TEMPERATURE.									
			At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Means of			Absolute Extremes.			
						Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.
		ins.	°	°	°	°	°	°	°		°	
0. SCOTLAND, N. -	Sandwick Manse (Orkneys) -	29·804	56·9	53·5	55·2	50·4	60·3	55·4	41·8	28th	69·0	16th
1. SCOTLAND, E. -	Glenalmond - - -	29·877	56·8	54·4	55·6	47·7	65·0	56·4	36·5	1st	79·7	14th
2. ENGLAND, N.E. -	Scaham - - -	29·884	60·4	55·7	58·1	50·6	66·2	58·4	39·8	25th	80·2	11th
	Durham* - - -	29·871	63·5	54·0	58·8	48·8	69·6	59·2	36·8	24th	89·0	14th
	Hull - - - -	29·921	62·4	59·1	60·8	52·2	70·7	61·5	44·0	24th & 25th	85·5	14th
	Kelstern (Calcethorpe) -	29·926	60·5	56·3	58·4	51·1	67·8	59·5	42·1	26th	81·9	13th
3. ENGLAND, E. -	Hillington - - -	29·923	64·7	57·7	61·2	51·3	73·2	62·3	35·9	26th	90·0	14th
	Audley End - - -	29·944	65·4	59·0	62·2	51·6	73·7	62·7	34·5	26th	91·8	14th
	Chigwell Row - - -	29·987	63·9	61·7	62·8	54·2	71·7	63·0	42·3	25th	89·0	13th
4. MIDLAND COUNTIES.	Buxton - - - -	29·932	59·2	55·2	57·2	48·2	67·1	57·7	36·3	24th	85·4	13th
	Cheadle - - -	29·931	57·8	58·0	57·9	50·4	67·9	59·2	39·0	25th	87·0	14th
	Leicester - - -	29·928	62·5	62·4	63·5	52·2	71·7	62·0	38·0	26th	91·9	14th
	Uppingham - - -	29·918	62·9	58·8	60·9	50·9	73·7	62·3	39·3	25th	97·1	14th
	Oscott - - - -	29·929	60·2	58·7	59·5	51·3	71·5	61·4	39·1	25th	92·1	13th
	Churchstoke - - -	29·948	59·2	55·7	57·5	51·2	69·3	60·3	42·0	31st	95·1	14th
	Hereford - - -	29·934	62·2	60·2	61·2	51·3	71·9	61·6	38·6	25th	89·5	13th
5. ENGLAND, S. -	Marlborough - - -	29·963	63·7	59·1	61·4	52·0	72·9	62·5	39·8	25th	92·0	13th
	Strathfield Turgiss -	29·964	64·5	60·1	62·3	54·5	75·1	64·8	40·4	25th	94·6	14th
	Ramsgate - - -	29·968	64·8	62·1	63·5	56·9	70·7	63·8	43·1	26th	80·1	14th
	Folkestone - - -	29·955	63·6	60·2	61·9	—	—	—	—	—	—	—
	Hastings - - -	29·963	64·0	61·2	62·6	55·3	70·4	62·9	44·1	26th	86·1	13th
6. SCOTLAND, W. -	——	—	—	—	—	—	—	—	—	—	—	—
7. ENGLAND, N.W. -	Hawes - - - -	29·917	58·9	53·9	56·4	47·9	66·4	57·2	36·7	25th	84·8	14th
	Llandudno - - -	29·914	62·7	59·2	61·0	54·9	70·1	62·5	48·6	31st	85·8	16th
8. ENGLAND, S.W. -	Caermarthen - - -	29·926	62·6	58·2	60·4	53·0	70·3	61·7	45·8	1st	86·0	13th
	Dartmoor - - -	30·080	59·2	54·6	56·9	50·6	64·4	57·5	41·0	25th	80·6	13th
9. IRELAND, N. -	Markree Castle - -	29·898	60·0	56·1	58·1	49·6	66·8	58·2	34·2	23rd	80·1	17th
10. IRELAND, S. -	Dublin - - - -	29·939	60·2	58·5	59·4	53·5	66·6	60·1	41·3	25th	73·4	14th
	Parsonstown - - -	29·941	60·6	56·4	58·5	52·1	68·5	60·3	37·0	25th	81·2	13th
CHANNEL - -	Jersey (St. Aubins) - -	30·033	66·4	61·9	64·2	57·9	71·9	64·9	52·4	31st	84·7	16th

* At Durham the observations were taken at 10 a.m. and 10 p.m. each day.

STATIONS of the SECOND ORDER in the BRITISH ISLANDS, during the month of AUGUST 1876.
corrected for Diurnal Range.

Latitude, beginning in each case with the Station lying furthest North.)

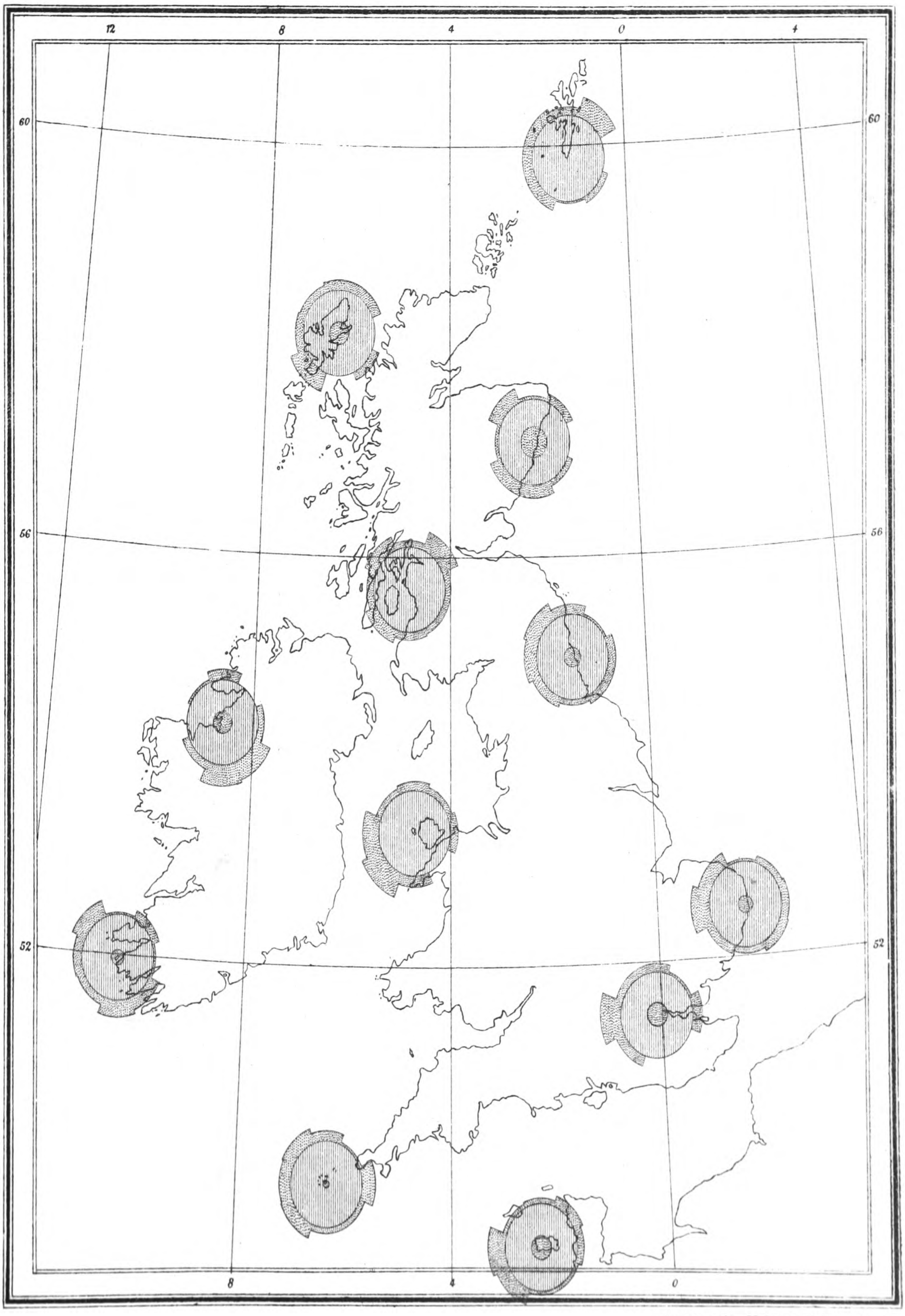
TENSION OF VAPOUR.			RELATIVE HUMIDITY.			AMOUNT OF CLOUD (0 to 10).			RAINFALL.			WEATHER, No. of Days of							WIND, No. of Observations of								
At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
in.	in.	in.	%	%	%				ins.	ins.																	
·357	·348	·353	77	85	81	4·6	5·1	4·9	2·560	·380	26th	17	0	0	0	11	9	2	0	3	2	18	3	10	12	11	3
·373	·362	·368	80	84	82	5·3	4·7	5·0	2·680	1·340	2nd	10	0	0	0	7	6	2	1	3	13	8	1	10	15	11	0
·410	·393	·402	78	88	83	4·4	3·1	3·8	2·120	·820	2nd	11	0	0	1	12	2	1	6	1	1	4	10	13	5	7	15
·443	·382	·413	76	91	84	5·5	3·6	4·6	2·868	1·097	2nd	11	0	0	0	9	5	0	4	4	6	1	11	10	11	9	6
·425	·421	·423	76	84	80	4·9	3·1	4·0	1·330	·370	31st	9	0	0	0	10	3	0	1	0	10	6	2	15	7	9	12
·428	·408	·418	80	89	85	5·5	4·2	4·9	3·233	·902	21st	15	0	1	2	7	4	0	0	3	14	5	5	13	15	4	3
·446	·416	·431	73	87	80	5·3	4·8	5·0	2·299	·675	28th	12	0	0	1	5	5	2	3	1	8	11	7	9	11	9	3
·443	·422	·433	71	84	77	4·9	4·0	4·4	1·480	·310	31st	13	0	0	3	5	4	0	0	4	2	3	0	23	4	12	14
·404	·399	·402	67	73	70	5·8	4·2	5·0	2·550	·580	19th	12	0	0	2	6	6	1	4	8	9	2	12	12	7	2	6
·392	·390	·391	78	89	83	6·1	4·8	5·5	3·935	1·080	2nd	14	0	0	2	4	6	1	4	2	3	6	1	7	22	14	3
·389	·389	·389	81	81	81	6·1	4·7	5·4	2·420	·430	31st	15	0	0	2	4	8	1	3	7	3	2	2	14	7	9	15
·393	·414	·404	69	74	72	6·0	5·3	5·7	2·110	·470	28th	12	0	0	1	5	9	4	2	3	3	4	3	14	14	4	15
·420	·425	·423	73	86	80	5·9	5·6	5·8	2·190	·588	28th	13	0	0	1	3	8	3	4	0	2	3	3	16	5	12	17
·414	·414	·414	79	83	81	7·1	4·9	6·0	2·330	·560	28th	15	0	0	4	5	12	2	2	11	3	2	7	15	7	12	3
·402	·372	·387	79	83	81	5·7	5·2	5·5	2·615	·890	2nd	15	0	0	1	1	5	2	4	7	5	1	2	15	8	7	13
·406	·402	·404	72	76	74	6·1	3·6	4·9	1·545	·580	19th	12	0	0	2	5	7	0	4	2	5	1	2	7	11	7	23
·456	·431	·444	77	86	81	5·5	4·3	4·9	4·748	·940	20th	12	0	0	1	8	7	p	3	5	2	0	5	10	10	4	23
·450	·432	·441	73	83	78	3·7	4·5	4·1	2·288	·720	19th	10	0	0	1	10	5	0	10	5	7	2	2	6	14	10	6
·467	·477	·472	76	85	80	5·4	3·7	4·6	1·700	·400	4th	12	0	0	5	5	4	7	11	6	6	4	10	9	8	3	5
·452	·438	·445	77	85	81	5·2	3·9	4·6	2·710	·540	4th	13	0	0	6	6	5	1	6	6	11	3	6	10	11	4	5
·451	·437	·444	75	81	78	4·5	3·6	4·1	3·370	·710	4th	16	0	0	2	12	5	7	9	11	3	3	6	14	11	5	0
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
·389	·373	·381	78	89	83	6·5	4·9	5·7	3·750	1·310	2nd	15	0	1	2	7	10	0	1	1	5	8	2	9	18	8	10
·406	·401	·404	71	80	76	6·3	4·9	5·6	2·750	·910	31st	13	0	0	2	9	12	0	6	5	4	6	0	13	22	6	0
·465	·450	·458	82	91	87	6·9	5·8	6·4	5·330	1·500	2nd	13	0	0	2	4	11	0	6	1	4	1	0	11	10	2	27
·420	·401	·411	83	93	88	6·6	5·1	5·9	7·950	1·430	4th	15	0	0	4	5	11	3	1	3	8	0	7	6	13	12	12
·408	·395	·402	78	86	82	7·8	5·9	6·9	3·934	1·200	30th	16	0	0	1	2	13	0	8	1	3	15	18	5	1	2	9
·403	·406	·405	77	83	80	5·8	4·5	5·2	2·260	·910	2nd	14	0	2	2	8	5	2	4	5	6	3	2	7	15	13	7
·413	·395	·404	78	86	82	7·1	5·6	6·4	3·433	1·569	2nd	18	0	0	1	2	12	0	2	1	2	13	3	10	14	14	3
·465	·451	·458	72	81	77	5·4	4·8	5·1	2·278	·650	30th	15	0	0	2	7	7	0	5	7	3	3	2	11	16	4	11

TABLE C., AUGUST.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC REPORTING STATIONS in the BRITISH ISLANDS, during the month of AUGUST, 1876. Observations are made at 8 a.m. daily.

(The Stations are grouped in Districts, and then arranged in order of Latitude, beginning in each case with the Station lying furthest North.)

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	AIR TEMPERATURE.								TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.			WEATHER. No. of Days of							WIND. No. of Observations of								
			Means of				Absolute Extremes.																									
			At 8 a.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.				Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
		ins.	°	°	°	°	°		°		in.	%		ins.	ins.																	
0. SCOTLAND, N.	Sumburgh Head	29·763	53·7	47·7	57·9	52·8	40	28th	67	20th	·343	83	6·3	5·23	1·62	22nd	18	0	0	0	8	13	3	3	8	4	3	1	4	4	4	0
	Stornoway	29·793	56·1	48·8	61·3	55·1	42	1st, 2nd	74	15th, 18th	·385	85	5·6	2·30	0·34	8th	18	0	0	0	10	12	5	4	4	0	3	0	8	4	3	5
	Thurso	29·797	56·2	49·9	65·4	57·7	39	29th	77	14th	·370	82	6·2	2·33	0·61	26th	19	0	0	0	6	10	2	1	2	2	3	4	5	4	3	7
	Wick	29·809	55·6	47·5	62·2	54·9	38	28th	76	16th	·367	82	4·9	2·16	0·93	26th	13	0	0	0	12	8	2	2	1	1	10	5	4	5	1	2
1. SCOTLAND, E.	Nairn	29·826	55·9	49·9	65·5	57·7	43	1st	80	19th	·346	77	5·4	1·79	0·52	30th	15	0	0	0	10	10	2	0	1	1	0	1	4	6	2	16
	Aberdeen	29·831	57·4	49·9	64·4	57·2	42	28th	75	11th	·359	76	4·4	1·43	0·45	28th	13	0	0	0	14	7	3	1	2	0	2	5	5	1	6	9
	Leith	29·865	57·8	51·3	68·3	59·8	42	25th	78	11th	·390	81	5·8	3·00	1·28	30th	12	0	0	0	6	9	0	1	3	5	3	2	4	7	6	0
2. ENGLAND, N.E.	Shields	29·879	57·4	52·2	64·6	58·4	42	24th, 25th	74	9th	·392	83	5·3	1·27	0·42	2nd	11	0	0	0	12	12	2	4	1	3	3	2	3	5	7	3
	Scarborough	29·899	59·6	53·1	64·4	58·8	45	24th, 25th	77	9th	·411	80	5·2	2·23	0·63	2nd	11	0	0	0	13	12	2	2	3	3	1	2	9	6	4	1
	York	29·907	58·0	50·9	71·1	61·0	40	24th	89	14th	·383	79	5·0	1·66	0·55	2nd	12	0	0	0	14	12	0	2	5	3	0	6	8	3	4	0
3. ENGLAND, E.	Yarmouth	29·939	60·8	55·8	67·4	61·6	42	26th	76	7th	·428	81	3·8	1·77	0·36	28th	16	0	0	0	15	4	0	1	2	3	4	2	3	8	6	2
	Cambridge	29·942	61·3	52·1	75·8	64·0	39	26th	95	14th	·423	78	5·4	1·64	0·37	4th	14	0	0	0	11	11	1	5	2	2	3	2	7	6	3	1
4. MIDLAND COUNTIES.	Nottingham	29·937	61·0	51·0	75·2	63·1	37	25th	96	14th	·422	79	6·4	1·59	0·27	2nd	15	0	0	0	7	13	1	4	2	1	2	7	5	6	4	0
	Oxford	29·937	60·2	53·2	73·1	63·2	41	25th	90	13th	·417	80	5·7	2·71	0·78	19th	11	0	0	0	9	10	0	1	2	0	0	1	4	9	3	11
5. ENGLAND, S.	London	29·953	62·7	54·2	76·3	65·3	41	26th	96	13th	·430	76	5·0	2·02	0·47	4th	11	0	0	0	9	9	0	3	1	4	0	0	4	10	3	6
	Dover	29·950	62·9	57·9	68·0	63·0	48	26th	77	17th	·441	78	3·5	2·97	0·71	30th	13	0	0	0	15	1	0	3	7	2	1	2	8	6	2	0
	Hurst Castle	29·953	62·4	55·5	68·7	62·1	45	25th	82	17th	·483	85	3·7	3·00	1·09	4th	11	0	0	0	15	5	3	3	3	4	0	0	1	7	8	5
6. SCOTLAND, W.	Ardrossan	29·868	58·2	54·5	66·4	60·5	40	25th	79	13th, 18th	·380	78	5·6	5·63	2·09	30th	15	0	0	0	6	9	2	2	7	2	2	3	5	4	6	0
7. ENGLAND, N.W.	Liverpool	29·896	59·1	54·8	67·8	61·3	46	31st	85	13th	·384	76	6·4	3·04	0·69	30th	13	0	0	0	7	12	4	0	2	5	5	0	6	10	3	0
	Holyhead	29·907	58·2	55·1	64·9	60·0	49	1st, 31st	77	17th	·418	86	6·0	2·50	1·10	2nd	16	0	0	0	8	10	3	3	2	3	0	4	10	7	2	0
8. ENGLAND, S.W.	Pembroke	29·942	59·1	55·8	65·3	60·6	49	31st	76	11th	·423	85	5·9	3·56	1·29	2nd	14	0	0	0	6	8	5	5	2	4	1	2	1	7	6	3
	Portishead	29·951	60·1	54·5	72·3	63·4	43	25th	87	13th, 17th	·440	82	6·4	4·83	2·09	19th	12	0	0	0	5	8	6	5	4	1	1	2	6	9	2	1
	Plymouth	29·970	62·0	56·5	69·7	63·1	48	25th, 26th	79	16th	·478	86	5·5	4·43	1·03	4th	12	0	0	0	12	13	2	3	4	6	1		4	6	3	3
9. IRELAND, N.	Greencastle	29·847	57·8	49·8	66·7	58·3	40	21st	81	13th	·407	84	7·1	4·84	1·52	30th	17	0	0	0	8	18	1	4	0	5	0	4	7	6	5	0
	Donaghadee	29·882	57·7	52·1	64·0	58·1	45	1st	70	12th 14th, 16th, 17th.	·425	89	5·5	2·98	1·41	2nd	11	0	0	0	10	9	3	3	2	1	2	4	5	7	7	0
10. IRELAND, S.	Kingstown	29·928	58·4	55·6	65·1	60·4	46	25th	71	9th	·392	80	4·9	2·56	1·27	2nd	12	0	0	0	10	4	2	4	0	2	7	2	1	9	6	0
	Roche's Point	29·958	59·9	55·0	67·9	61·5	47	1st	76	20th	·413	81	5·7	3·01	0·85	17th	15	0	0	0	6	9	2	4	3	1	5	2	5	6	5	0
	Valencia	29·947	60·2	54·9	65·8	60·4	46	25th	78	12th, 13th	·432	83	7·1	5·41	1·38	2nd	20	0	0	0	4	16	0	1	3	1	4	6	3	4	7	2
CHANNEL	Scilly (St. Mary's)	29·984	61·9	57·8	65·6	61·7	51	26th	72	13th	·480	87	7·7	3·69	0·70	4th	20	0	0	0	2	15	4	3	1	5	2	2	6	5	6	1

MONTHLY WIND CHART—AUGUST 1876.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4
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56
56
52
52
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DANGERFIELD LITH. 22. BEDFORD S^T COVENT GARDEN 7228

MONTHLY WEATHER CHART – AUGUST 1876.

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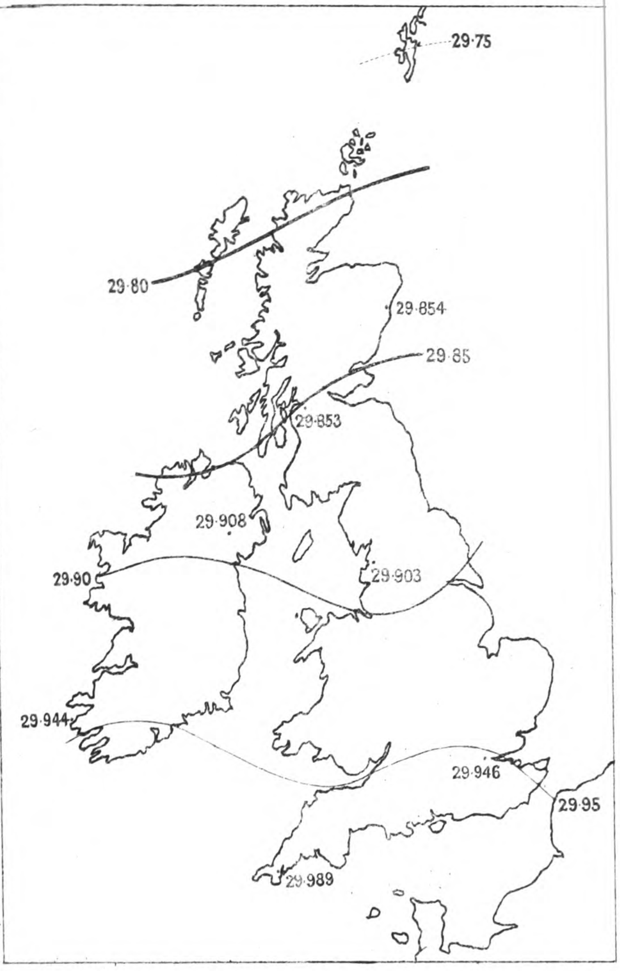
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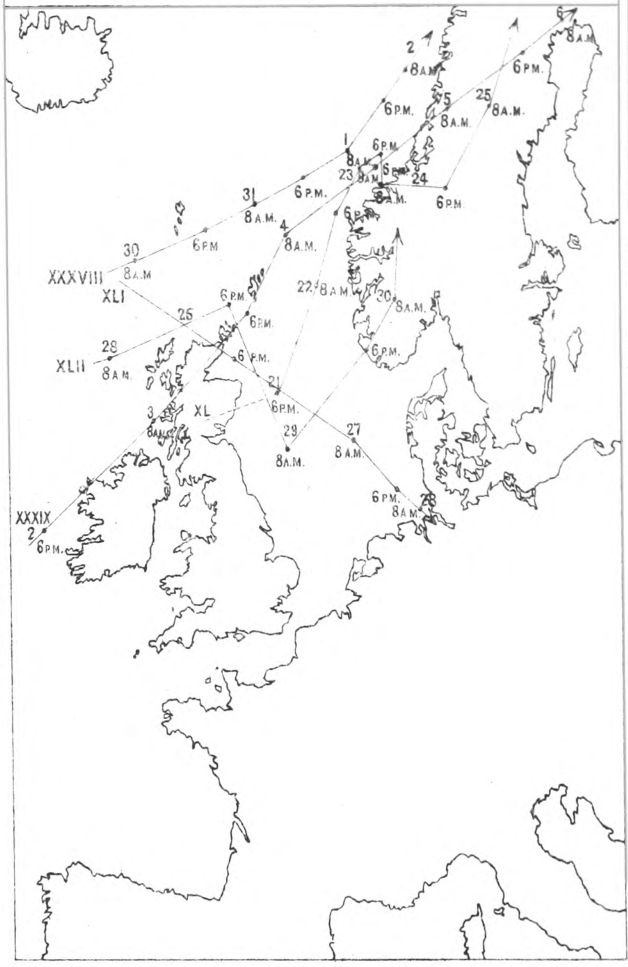
2. MOVEMENTS OF DEPRESSIONS.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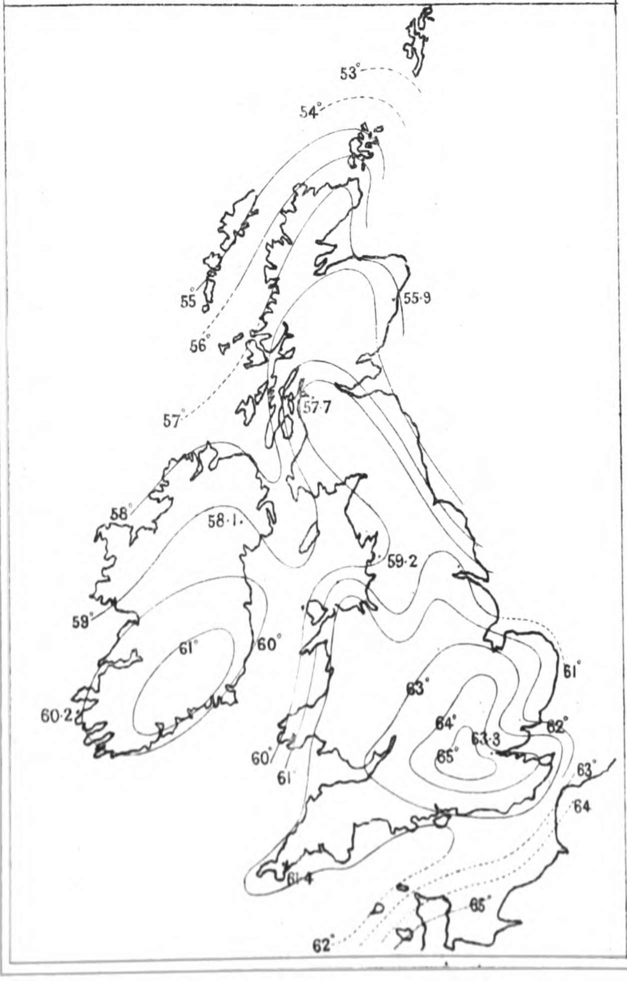
6 P.M.
8 A.M.
5
25
8 A.M.
6 P.M.
1
8 A.M.
23
24
6 P.M.
31
8 A.M.
6 P.M.
4
8 A.M.
30
8 A.M.
6 P.M.
XXXVIII
XLI
22
8 A.M.
20
8 A.M.
25
6 P.M.
28
8 A.M.
XLII
6 P.M.
21
6 P.M.
3
8 A.M.
XL
29
8 A.M.
27
8 A.M.
6 P.M.
28
8 A.M.
XXXIX
2
6 P.M.

3. DISTRIBUTION OF MEAN TEMPERATURE.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55°
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60°
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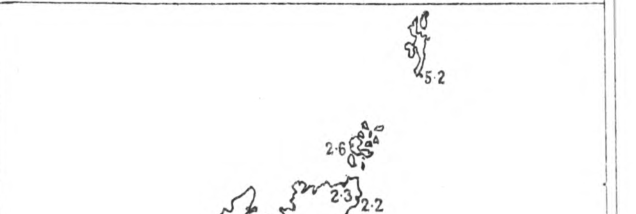
60·2
61°
63°
64°
63·3
62°
65°
60°
61°
63°
64
61·4
65°
62°

4. RAINFALL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1·8
2·7
4·7
3·0
5·6
4·8
1·3
2·9
2·1
2·7
3·0
3·8
1·7
2·2
3·9
4·3
1·3
3·9
2·5
3·0
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2·3
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2·8
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1·6
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2·1
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2·3
1·9
1·7
3·0
2·7
8·0
3·4
4·4
3·0
5·2
3·7
2·3

To follow Wind Chart for August

DANGERFIELD LITH 22 BEDFORD S. COVENT GARDEN 7.28.

REMARKS FOR SEPTEMBER.

Wind.—At the commencement of the month the general direction of the wind was North-westerly, and although on the Eastern coasts it continued to blow strongly, owing to the depression then lying over Denmark, it had considerably moderated in force over all other parts of the kingdom. On the 3rd a very general shift to S. took place, which was followed on the 4th by a veering to Westward over England and Ireland, but by a backing to Eastward over Scotland; by the evening of the 5th the depression to which these changes were due had passed away to the N.E. of the British Islands, and the winds had become Westerly in the North and Southerly over the southern and western districts. Westerly and North-westerly winds then became general and continued till the 14th, freshening considerably at the northern and eastern stations on the 11th and 12th under the influence of a depression which then lay over Scandinavia. On the 15th a depression approached the Irish coasts from the Atlantic, and caused a general change of direction to E. and S.E., followed on the 16th by a veering to W. at the southern stations, and later on by a similar change over the northern and north-eastern portions of the country also. Westerly winds continued until the 20th, when the general direction again became Easterly, and in the extreme West the breeze freshened, although in other parts it still remained light. A gradual veering to Southward then began and continued till the 24th, when with the passage of a depression (No. XXXIV.) the wind further veered to W. over the southern and western parts of the country, and backed through E. to N. and N.W. over Scotland and Northern Ireland. On the 26th another disturbance arrived and caused similar changes of wind direction to occur; after which on the 27th North-easterly and Easterly winds became general over the whole kingdom, and blew with considerable strength over the southern portion on the 30th, with the passage along the Channel of depression No. XXXVI. From the monthly wind chart it will be seen that, as the general result for the month, Westerly winds predominated over the Southern and South-eastern parts of the kingdom; North-westerly and Northerly winds over the N.W. portions; and Northerly and North-easterly winds over Scotland and the N.E. coasts.

Pressure.—The mean pressure for the month was very uniform over the British Isles, the difference between the mean value over the southern and northern extremes being only 0·1 inch. The lowest pressure was apparently to the N.E. of the kingdom, the isobar of 29·7 inches running almost N. and S. along the N.E. coast of Scotland, whilst the line which crosses Central England takes a very decided trend northward as it passes over the Irish Sea and Ireland. The maximum pressure at Valencia occurred on the evening of the 19th, and at all the other observatories on the 20th, the centre of an anticyclone lying over the British Isles at that time; the highest reading was 30·404 inches, recorded at Kew. The minima were everywhere above 29 inches; at the northern stations they occurred on the 5th, with a depression whose centre passed over Scotland not far from both Glasgow and Aberdeen; at Valencia it was recorded on the 24th during the passage of a depression the centre of which crossed the South of Ireland and Central England; and at the Southern stations it was reached on the 30th with the deep depression which passed along the English Channel in the evening of that day, and which caused pressure to give way very sharply at stations near its centre; at Jersey, on the Southern side of the centre, the fall for a short time was at the rate of 0·2 inch per hour.

Movements of Depressions.—Comparatively few depressions passed over Great Britain during the month. The first observed moved slowly in a North-easterly direction across Scotland towards Scandinavia, where it eventually disappeared; this was followed by the appearance over Denmark of a disturbance which first moved northward to Sweden, then eastward to the Baltic, and then returned westward and southward across Sweden and Norway to the North Sea, where it dispersed. A shallow depression then reached our S.W. coasts and passed quickly away to the North, while another and deeper one appeared over Germany and moved northward to Sweden. An area of high pressure, which first showed itself over Southern France, then moved up to Southern England, and gradually extended northward and eastward till it lay in a long belt stretching N. and S. over Western Europe. Towards the end of the month a series of three or four depressions, some of them deep, passed eastward across Central and Southern England to the Continent.

Temperature.—The range of mean temperature, corrected for height above mean sea level, was less than in August, and its distribution over the country was more regular, decreasing northwards from 58° along the coast of the English Channel, to 50° in the N. of Scotland. The maximum temperatures over England and Wales occurred generally about the 21st, when the centre of an anticyclone lay over the North Sea, causing light South-easterly airs to blow over the country; 75° was the highest temperature reached, and was recorded at London, Nottingham, and Llandudno, while at other Welsh and Midland stations temperatures nearly as high were recorded. The dates on which the minimum temperatures occurred varied considerably, but over Scotland it was generally about the 3rd, while over England and Ireland they were generally reached on the 15th during the prevalence of a moderate North-easterly wind, due to a depression then lying over the North Sea. The lowest readings recorded were 33° at Wick and 33°·3 at Markree, but at the majority of the stations the minima did not fall below 40°.

Vapour Tension.—The distribution of Vapour Tension was somewhat irregular, but was greatest over the Southern English coast and the Channel, and least over Scotland and Northern England. Relative Humidity was least over Central Scotland and Southern Ireland, and was also low over Wales, whilst it was greatest over both South-western and Eastern England.

Rainfall.—The fall of rain over the Midland and south-western portions of the kingdom somewhat exceeded the average for the month, while over the northern parts and over Ireland it was not excessive. Falls exceeding 1 inch in 24 hours occurred at several places; 1·64 inch fell at Marlborough on the 5th and nearly 2 inches at Dartmoor on the 29th. The heaviest falls occurred in the N. about the 3rd, in the W. about the 23rd, and in the S. on the 30th.

TABLE A., SEPTEMBER.—SHOWING the MEAN and EXTREME PRESSURES and TEMPERATURES recorded at each of the SEVEN SELF-RECORDING OBSERVATORIES of the METEOROLOGICAL OFFICE during the Month of SEPTEMBER 1876; together with the MONTHLY VAPOUR TENSION, the RELATIVE HUMIDITY, and TOTAL RAINFALL.

NAMES OF OBSERVATORIES.	PRESSURE at 32° F. and the Mean Sea Level (In English Inches).						TEMPERATURE in the Shade (In Degrees Fahrenheit).						HYGROMETRIC VALUES.		RAINFALL (In English Inches).
	Mean for the Month.	Extremes.				Range.	Mean for the Month.	Extremes.				Range.	Tension of Vapour (In English Inches).	Relative Humidity (Saturation=100).	
		Minimum.		Maximum.				Minimum.		Maximum.					
		Reading.	Date.	Reading.	Date.			Reading.	Date.	Reading.	Date.				
Valencia -	ins. 29·794	ins. 29·240	D. H. 24th, 6 a.m.	ins. 30·204	D. H. 19th, 8 p.m.	ins. ·964	55°·9	47°·0	D. H. 29th, 5 a.m.	64°·2	D. H. 23rd, 1 p.m.	17°·2	in. ·371	% 83	ins. 6·235
Armagh - -	·780	·228	5th, 3 a.m.	·312	20th, 10 a.m.	1·084	52·8*	39·5	15th, 5 a.m.	65·2	4th, 1 p.m.	25·7	·345	86	2·830
Glasgow - -	·732	·073	5th, 5 a.m.	·346	20th, 11 a.m.	1·273	52·1	38·7	30th, 6 a.m.	66·2	21st, 3 p.m. 22nd, 4 p.m.	27·5	·317	81	2·798
Aberdeen - -	·745	·065	5th, 9 a.m. 10 a.m.	·377	20th, 11 a.m.	1·312	50·8	37·7	3rd, 4 a.m.	63·4	5th, 2 p.m.	25·7	·323	86	3·070
Falmouth - -	·834	·068	30th, 5 p.m.	·380	20th, 10 a.m.	1·312	56·6	49·3	15th, 5 a.m.	65·5	5th, 2 p.m.	16·2	·397	86	7·060
Stonyhurst - -	·759	·313	5th, 3 a.m. 4 a.m.	·367	20th, Noon	1·054	53·5	42·2	15th, 4 a.m.	69·6	21st, 3 p.m.	27·4	·336	82	5·487
Kew - -	29·801	29·262	30th, Midt.	30·404	20th, 9 a.m.	1·142	56·0	42·0	21st, 5 a.m.	70·9	22nd, 1 p.m.	28·9	·368	82	2·614

* Means for two days are approximate.

TABLE B., SEPTEMBER.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at
The values are not
(The Stations are grouped in Districts, and then arranged in order of

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 9 a.m. and 9 p.m.	AIR TEMPERATURE.									
			At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Means of			Absolute Extremes.			
						Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.
		ins.	°	°	°	°	°	°	°		°	
0. SCOTLAND, N.	Sandwick Manse (Orkneys)	29·742	50·8	49·0	49·9	47·4	53·4	50·4	39·3	4th	57·8	16th
1. SCOTLAND, E.	Glenalmond	29·759	50·6	49·8	50·2	44·4	58·2	51·3	34·5	3rd	63·7	6th
2. ENGLAND, N.E.	Seaham	29·747	54·4	51·8	53·1	48·1	58·7	53·4	40·8	15th	67·2	4th
	Durham*	29·742	55·4	49·7	52·6	46·3	60·3	53·3	40·5	12th	69·3	22nd
	Hull	29·778	55·7	52·3	54·0	48·9	61·0	55·0	43·0	8th	70·5	21st
	Kelstern (Calcethorpe)	29·768	53·1	50·7	51·9	47·3	59·6	53·5	41·9	12th, 19th	67·8	4th
3. ENGLAND, E.	Hillington	29·754	55·5	51·4	53·4	47·0	62·5	54·8	39·0	16th, 20th	70·6	21st
	Audley End	29·802	56·5	53·0	54·7	48·3	63·2	55·8	36·9	15th	70·2	22nd
	Chigwell Row	29·836	56·0	54·5	55·3	49·7	62·0	55·9	41·3	13th	70·0	22nd
4. MIDLAND COUNTIES.	Buxton	29·788	53·0	49·8	51·4	45·9	58·5	52·2	35·5	15th	69·9	21st, 22nd
	Cheadle	29·777	52·7	51·3	52·0	46·4	58·9	52·7	40·1	29th	67·9	22nd
	Leicester	29·779	55·6	54·1	54·9	49·1	62·0	55·6	41·8	15th	70·7	21st
	Uppingham	29·769	54·8	51·3	53·1	46·8	61·8	54·3	40·3	16th	71·0	22nd
	Oscott	29·780	54·3	52·2	53·3	48·1	62·1	55·1	42·2	15th	72·2	21st
	Churchstoke	29·797	54·4	52·4	53·4	47·5	60·4	54·0	39·0	15th	70·1	21st
	Hereford	29·783	56·0	53·1	54·6	48·7	62·5	55·6	40·1	15th	70·2	21st
5. ENGLAND, S.	Marlborough	29·812	56·9	53·0	54·9	48·7	63·8	56·3	40·8	15th	71·5	20th
	Strathfield Turgiss	29·815	57·0	53·0	55·0	47·8	64·7	56·3	37·2	15th	71·8	20th
	Ramsgate	29·819	58·1	55·5	56·8	51·4	63·6	57·5	43·5	13th	69·7	6th
	Folkestone	29·809	58·2	54·2	56·2	—	—	—	—	—	—	—
	Hastings	29·828	57·5	55·0	56·3	50·9	63·1	57·0	43·1	13th	67·6	6th
6. SCOTLAND, W.	——	—	—	—	—	—	—	—	—	—	—	—
7. ENGLAND, N.W.	Hawes	29·780	51·7	49·0	50·4	45·6	57·5	51·6	36·0	12th	70·2	21st
	Llandudno	29·770	57·3	54·1	55·7	51·2	62·6	56·9	41·5	15th	74·6	21st
8. ENGLAND, S.W.	Caermarthen	29·768	57·1	53·7	55·4	50·4	63·0	56·7	43·9	15th	73·2	21st
	Dartmoor	29·916	52·9	50·4	51·7	47·3	56·9	52·1	38·5	15th	66·6	21st
9. IRELAND, N.	Markree Castle	29·784	54·4	51·6	53·0	47·0	61·1	54·1	33·3	15th	67·4	23rd
10. IRELAND, S.	Dublin	29·793	54·4	53·1	53·8	49·9	59·8	54·9	41·0	15th	66·4	4th
	Parsonstown	29·795	54·3	51·7	53·0	49·2	61·1	55·2	37·3	15th	67·6	4th
CHANNEL	Jersey (St. Aubin's)	29·895	61·0	58·0	59·5	54·8	65·2	60·0	46·3	15th	69·5	5th

* At Durham the observations were taken at 10 a.m. and 10 p.m. each day.

STATIONS of the SECOND ORDER in the BRITISH ISLANDS, during the Month of SEPTEMBER 1876.
corrected for Diurnal Range.
Latitude, beginning in each case with the Station lying furthest North.)

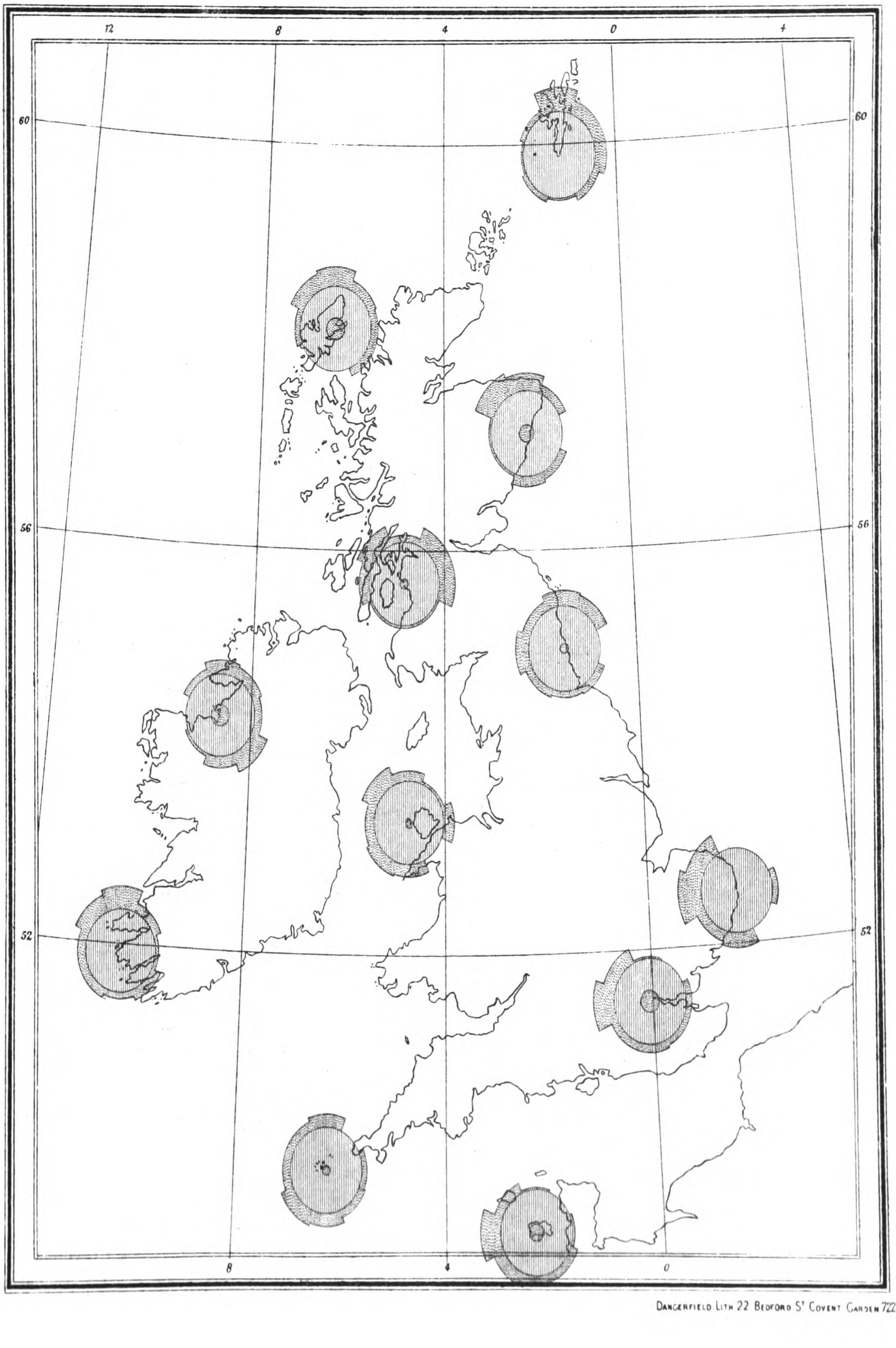
TENSION OF VAPOUR.			RELATIVE HUMIDITY.			AMOUNT OF CLOUD (0 to 10.)			RAINFALL.			WEATHER. No. of Days of							WIND. No. of Observations of								
At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
in.	in.	in.	%	%	%				ins.	ins.																	
·319	·303	·311	86	87	87	7·2	7·9	7·6	3·180	·800	5th	22	0	0	0	1	17	0	15	5	4	18	2	1	4	8	3
·309	·310	·310	83	86	85	7·1	6·9	7·0	3·200	1·090	4th	15	0	0	1	2	15	1	5	4	12	8	3	8	4	14	2
·359	·358	·359	85	93	89	7·5	5·5	6·5	3·420	·390	2nd	25	0	0	1	1	11	0	12	5	3	4	7	5	8	10	6
·365	·340	·353	83	95	89	7·8	6·8	7·3	3·144	·415	3rd	19	0	0	3	1	12	0	8	5	2	0	14	6	3	15	7
·410	·379	·395	93	97	95	7·1	5·3	6·2	2·860	·470	30th	22	0	0	0	4	11	0	2	3	3	7	3	5	5	19	13
·360	·347	·354	89	94	91	7·9	6·1	7·0	3·692	·664	30th	23	0	0	3	1	13	0	5	4	3	4	8	5	18	11	2
·400	·364	·382	91	96	94	7·8	6·8	7·3	4·591	·526	4th	23	0	0	6	2	13	0	3	2	1	7	4	5	11	19	8
·386	·371	·378	84	92	88	6·9	5·9	6·4	4·240	·960	5th	20	0	0	4	1	12	0	0	0	1	5	2	11	6	24	11
·373	·362	·368	83	85	84	8·1	5·4	6·8	2·870	·730	30th	17	0	0	5	2	13	0	4	3	4	5	6	19	9	5	5
·347	·327	·337	86	91	88	7·6	7·5	7·6	6·710	·850	8th	22	0	0	3	1	13	0	6	2	5	7	0	10	11	18	1
·339	·338	·338	85	89	87	7·3	6·3	6·8	5·690	·730	3rd	23	0	0	2	2	13	0	1	7	3	4	0	8	5	15	17
·354	·354	·354	79	84	82	8·1	5·5	6·8	5·560	·780	18th	22	0	1	2	1	12	0	3	4	5	1	4	14	15	8	6
·360	·343	·352	84	91	88	7·2	6·4	6·8	4·857	·880	28th	17	0	0	2	2	12	0	5	2	1	5	5	4	0	24	14
·368	·362	·365	87	92	90	7·6	6·8	7·2	3·660	·530	28th	23	0	0	5	2	13	1	5	7	4	4	7	8	7	17	1
·354	·345	·350	84	87	85	6·8	5·3	6·1	4·204	·837	24th	25	0	0	1	1	6	0	0	7	5	6	3	9	13	9	8
·361	·359	·360	80	88	84	6·1	6·1	6·1	5·089	·970	30th	21	0	0	1	2	8	0	3	3	6	1	5	4	6	8	24
·407	·382	·394	88	95	92	7·2	7·1	7·2	6·875	1·640	5th	24	0	0	1	1	11	0	3	0	1	4	1	5	16	4	26
·390	·369	·380	84	91	87	5·9	6·2	6·1	3·740	·785	4th	21	0	0	2	3	9	0	7	1	2	6	4	7	9	12	12
·417	·404	·411	86	91	88	6·7	5·2	6·0	2·870	·440	30th	14	0	1	3	2	7	6	7	0	2	0	19	11	9	6	6
·404	·383	·394	83	91	87	5·9	4·6	5·3	3·100	·630	6th	21	0	0	2	7	8	2	0	0	4	2	8	9	12	19	6
·398	·387	·393	83	89	86	6·1	5·5	5·8	3·675	·545	6th	23	0	0	3	6	13	6	3	2	4	4	8	12	20	6	1
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
·338	·327	·333	88	94	91	8·6	7·7	8·2	5·520	·860	4th	24	0	0	1	0	18	0	3	3	8	4	1	6	9	5	21
·364	·360	·362	77	86	81	7·7	6·7	7·2	4·060	·760	30th	24	0	1	0	3	17	1	9	1	6	3	4	5	19	13	0
·408	·393	·401	87	94	91	7·1	6·8	7·0	6·980	1·340	27th	25	0	0	1	1	11	0	4	2	2	2	2	9	8	12	19
·356	·350	·353	89	95	92	8·0	7·5	7·8	12·960	1·900	29th	25	0	0	0	2	19	5	1	0	2	7	4	5	16	21	4
·356	·343	·350	84	89	86	7·6	7·9	7·8	3·248	·580	4th	25	0	0	0	0	17	0	11	7	4	14	7	3	0	5	9
·354	·352	·353	83	87	85	6·9	6·2	6·6	3·146	·464	3rd	17	0	0	0	0	7	1	5	4	3	7	4	2	11	15	9
·360	·354	·357	85	92	88	8·1	7·8	8·0	4·431	1·152	25th	22	0	0	0	0	17	0	6	1	3	17	1	8	9	13	2
·424	·409	·417	79	85	82	7·0	6·1	6·6	6·041	1·181	13th	25	0	0	0	2	10	1	2	0	1	7	6	10	21	7	6

TABLE C., SEPTEMBER.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC REPORTING STATIONS in the BRITISH ISLANDS, during the month of SEPTEMBER, 1876. Observations are made at 8 a.m. daily.

(The Stations are grouped in Districts, and then arranged in order of Latitude, beginning in each case with the Station lying furthest North.)

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	AIR TEMPERATURE.									TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.			WEATHER, No. of Days of							WIND, No. of Observations of								
				Means of			Absolute Extremes.																										
			At 8 a.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.				Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
		ins.	°	°	°	°	°		°		in.	%		ins.	ins.																	
0. SCOTLAND, N.	Sumburgh Head	29·696	50·0	45·9	53·2	49·6	39	4th	59	8th	·314	87	8·2	2·47	0·50	5th	22	0	0	0	0	14	2	11	5	5	3	1	2	1	2	0
	Stornoway	29·735	50·2	44·5	54·6	49·6	39	3rd, 30th	61	22nd, 23rd	·327	91	8·7	2·30	0·46	17th	24	0	0	0	2	22	1	7	4	3	3	0	0	2	6	5
	Thurso	29·717	51·3	47·6	55·9	51·8	39	4th	52	8th, 22nd	·334	88	8·7	3·62	0·83	5th	27	0	0	0	0	19	1	6	1	2	6	3	1	1	6	4
	Wick	29·720	50·9	46·1	54·3	50·2	33	30th	59	6th	·337	91	8·3	3·07	0·64	5th	21	0	0	0	5	24	0	3	1	3	6	2	1	2	5	7
1. SCOTLAND, E.	Nairn	29·738	50·4	47·4	55·5	51·5	38	29th	66	23rd	·320	88	8·0	3·51	0·55	24th	23	0	0	0	2	17	3	0	1	3	0	0	0	2	11	13
	Aberdeen	29·703	51·4	47·5	55·9	51·7	38	3rd	64	5th	·329	86	7·1	3·32	0·90	4th	19	0	0	0	4	13	3	7	3	0	3	4	1	1	9	2
	Leith	29·729	52·4	47·6	62·1	54·9	41	3rd	70	2nd	·345	88	6·5	3·78	0·70	28th	22	0	0	0	4	11	0	2	3	5	3	1	1	10	4	1
2. ENGLAND, N.E.	Shields	29·725	52·6	49·0	57·9	53·5	42	11th, 12th	66	5th	·329	83	7·6	2·60	0·49	26th	23	0	0	0	2	18	2	6	5	0	3	2	3	6	4	1
	Scarborough	29·733	53·8	50·1	57·1	53·6	43	12th	64	4th, 5th	·360	86	7·4	3·83	0·67	24th	22	0	0	0	1	11	3	4	2	1	2	2	4	6	9	0
	York	29·743	52·4	47·5	61·4	54·5	41	12th	71	22nd	·354	89	7·5	4·91	0·77	22nd	23	0	0	0	4	18	0	5	0	2	2	4	2	6	9	0
3. ENGLAND, E.	Yarmouth	29·756	54·2	50·2	59·9	55·1	45	2nd, 13th, 20th.	69	5th	·385	92	6·2	5·01	0·62	7th	25	0	0	0	7	8	1	0	0	2	0	5	4	12	7	0
	Cambridge	29·782	53·5	48·6	63·9	56·3	40	15th	73	21st	·373	91	7·1	4·56	0·78	30th	24	0	0	0	5	15	0	4	0	2	1	6	6	6	5	0
4. MIDLAND COUNTIES.	Nottingham	29·776	53·1	47·2	63·9	55·6	37	15th	75	21st	·368	91	7·3	4·48	0·82	30th	20	0	0	0	5	15	0	2	2	1	1	3	5	6	7	3
	Oxford	29·772	54·4	49·4	62·8	56·1	41	21st	70	22nd	·372	88	6·5	5·71	1·01	30th	21	0	0	0	6	11	0	2	0	1	4	1	5	7	4	6
5. ENGLAND, S.	London	29·796	55·6	48·8	66·2	57·5	41	13th	75	21st	·388	87	7·2	2·41	0·62	30th	21	0	0	0	4	15	3	1	0	2	2	3	3	10	5	4
	Dover	29·801	56·6	53·0	61·9	57·5	46	13th	65	5th, 23rd, 25th.	·380	82	3·5	2·44	0·54	24th	22	0	0	0	14	2	1	1	0	1	1	3	7	10	6	1
	Hurst Castle	29·789	57·7	53·0	62·7	57·9	44	15th	67	22nd	·342	93	5·1	3·35	0·55	30th	23	0	0	0	9	8	3	2	3	1	2	3	2	3	14	0
6. SCOTLAND, W.	Ardrossan	29·744	52·5	48·7	60·0	54·4	39	30th	65	21st, 22nd	·332	84	6·0	3·59	0·87	22nd	15	1	0	0	7	10	0	2	6	6	1	1	1	5	7	1
7. ENGLAND, N.W.	Liverpool	29·744	53·8	50·4	59·9	55·2	42	1st	71	21st	·342	82	6·8	3·67	0·61	30th	21	0	0	0	5	12	2	1	2	4	5	0	4	8	6	0
	Holyhead	29·749	54·4	52·4	60·3	56·4	47	16th	70	21st	·367	87	7·3	2·59	0·61	30th	17	0	0	0	2	11	4	4	1	4	0	4	5	4	7	1
8. ENGLAND, S.W.	Pembroke	29·776	55·3	53·1	59·2	56·2	47	14th	63	3rd, 21st 22nd.	·380	87	5·0	4·03	0·57	23rd	22	0	0	0	7	5	7	2	1	2	5	0	3	6	9	2
	Portishead	29·785	55·2	50·4	63·8	57·1	46	15th, 21st	74	21st	·395	91	7·2	5·88	1·03	30th	22	0	0	1	3	13	3	0	2	2	1	3	3	11	5	3
	Plymouth	29·812	55·7	51·0	63·0	57·0	44	20th	68	21st, 22nd	·419	94	6·4	5·31	1·00	29th	21	0	0	0	8	14	6	2	1	5	1	1	6	6	8	0
9. IRELAND, N.	Greencastle	29·732	52·7	46·9	60·4	53·7	37	15th	68	23rd	·356	89	7·3	5·20	0·88	24th	18	0	0	0	6	18	0	10	2	4	2	2	2	5	3	0
	Donaghadee	29·747	53·4	49·5	58·4	54·0	42	15th	65	4th	·380	93	4·9	4·92	1·31	22nd	17	0	0	0	11	7	2	6	3	1	3	2	4	8	3	0
10. IRELAND, S.	Kingstown	29·776	53·7	51·2	59·0	55·1	46	15th	65	4th	·346	84	6·3	3·05	0·68	22nd	21	0	0	0	5	11	1	0	1	2	3	3	1	7	11	2
	Roche's Point	29·755	55·3	51·7	60·2	56·0	47	19th	64	19th	·364	83	5·9	6·20	1·06	15th	17	0	0	0	6	9	3	7	1	2	2	3	3	4	8	0
	Valencia	29·791	55·7	51·6	60·7	56·2	45	29th	64	2nd, 18th	·376	85	7·8	5·75	1·20	21st	23	0	0	0	0	12	1	8	3	1	4	2	3	3	6	0
CHANNEL	Scilly (St. Mary's)	29·830	57·8	53·8	60·6	57·2	49	13th	66	23rd	·421	87	8·6	3·63	0·56	23rd	27	0	0	0	0	18	7	5	0	2	3	5	6	4	4	1

MONTHLY WIND CHART—SEPTEMBER 1876.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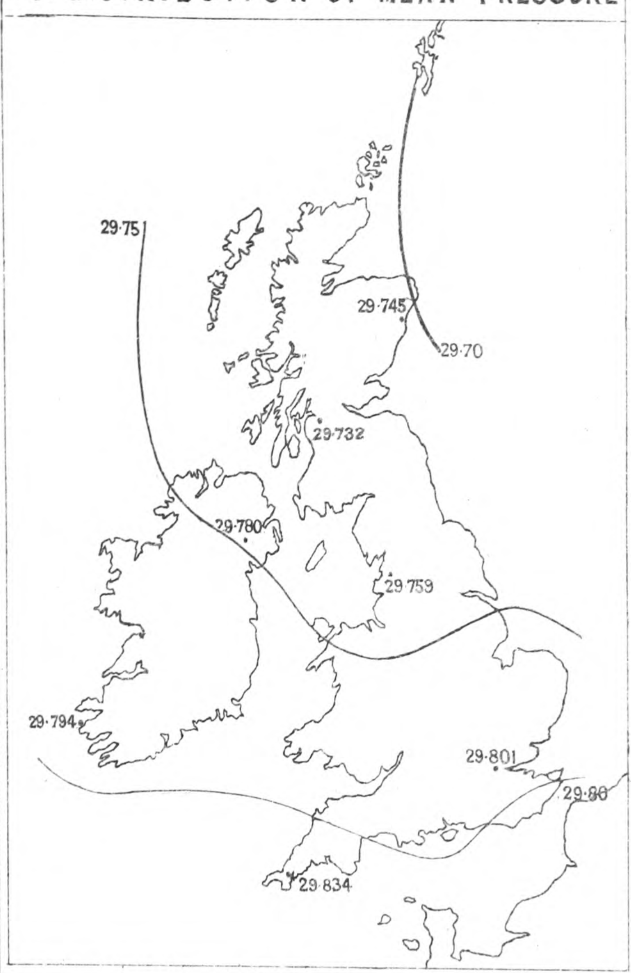
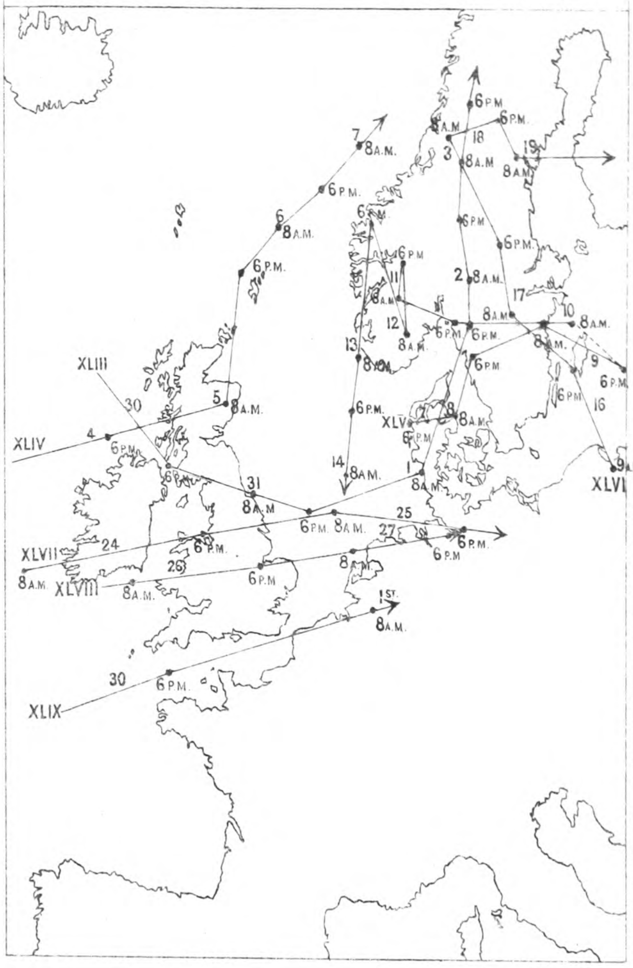
MONTHLY WEATHER CHART – SEPTEMBER 1876.

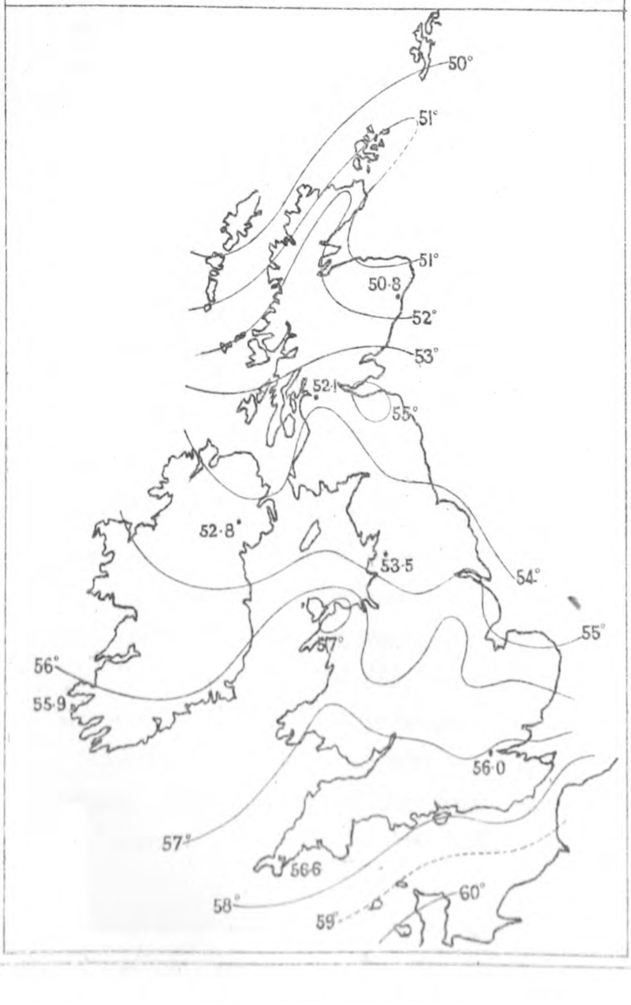
1. DISTRIBUTION OF MEAN PRESSURE


29·75
29·745
29·70
29·732
29·780
29·759
29·794
29·801
29·80
29·834

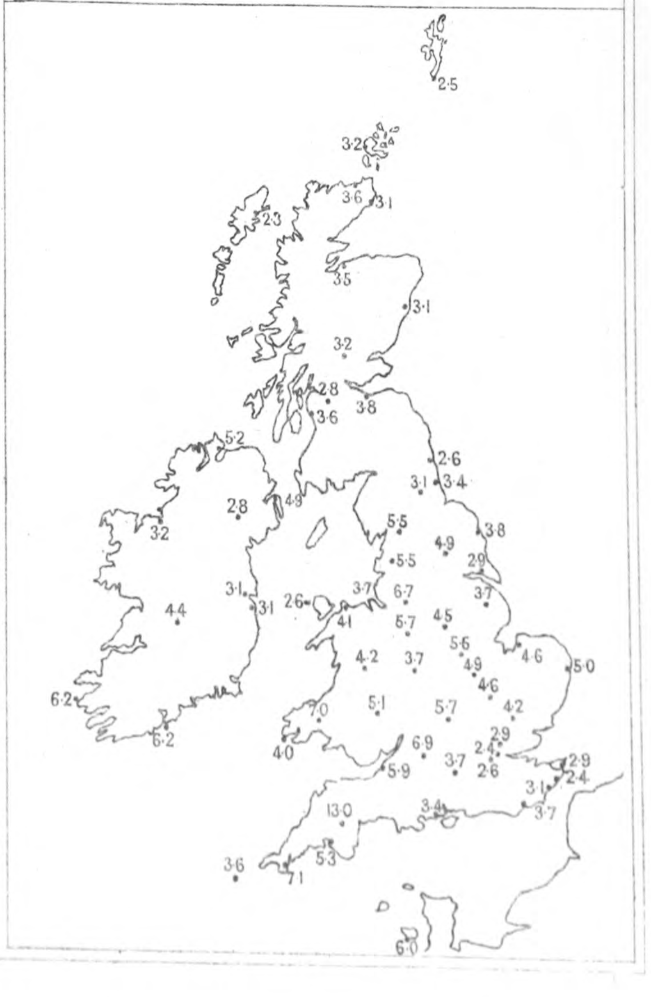
2. MOVEMENTS OF DEPRESSIONS.


XLIII
XLIV
XLV
XLVI
XLVII
XLVIII
XLIX
8 A.M.
6 P.M.
1 ST.
1
2
3
4
5
6
7
9
10
11
12
13
14
16
17
18
19
24
25
26
27
30
31

3. DISTRIBUTION OF MEAN TEMPERATURE.


50°
51°
51°
50·8
52°
53°
52·1
55°
52·8°
53·5
54°
55°
56°
55·9
57°
56·0
57°
56·6
58°
59°
60°

4. RAINFALL


2·5
3·2
3·6
3·1
2·3
3·5
3·1
3·2
2·8
3·6
3·8
5·2
2·6
3·1
3·4
2·8
4·8
3·2
5·5
3·8
4·9
5·5
2·9
3·1
3·1
2·6
3·7
6·7
3·7
4·4
4·1
5·7
4·5
5·6
4·6
5·0
4·2
3·7
4·9
4·6
6·2
7·0
5·1
5·7
4·2
6·2
4·0
6·9
2·9
2·4
3·7
2·6
2·9
5·9
2·4
3·1
13·0
3·4
3·7
5·3
3·6
7·1
6·0

To follow Wind Chart for September.

DANGERFIELD LITH 22 BEDFORD ST COVENT GARDEN.
7227

PART 4.

SECTION I.

GENERAL SUMMARY FOR THE QUARTER.

THE closing quarter of the year was marked by the occurrence as well of very deep depressions, accompanied by steep gradients and violent winds, as of some well-marked anticyclonic systems, in which very high barometrical readings were attained. The range of pressure during the period was therefore considerable, readings varying over our Islands from 28·2 inches to nearly 30·5 inches, while over Northern Europe, on one occasion, they exceeded the high point of 30·8 inches. Temperature, also, exhibited considerable fluctuations, rising very generally to between 65° and 71° at the end of October, and falling, in the middle of November, to below 20° in the N. of Scotland, and to between 20° and 25° in most other districts. During the first part of the period a large system of high pressure existed over Western Europe, and naturally during its continuance only a few depressions reached our coasts; but later on the distribution of pressure became altered, and several deep depressions arrived, generally from the S.W. and travelling in a north-easterly or northerly direction.

October 1st.—Two centres of low pressure existed over Western Europe,—one over Finland and the other over Belgium; the former was moving to the Eastward, while the latter, after having travelled along the English Channel during the preceding 24 hours, was now quickly filling up. Over the British Isles a general increase of pressure was in progress, and in the South, where a sharp fall had taken place the day before, the rise was very rapid. The highest readings were in the N.W. of Scotland, where an area of relatively high pressure had begun to show itself; the wind blew with moderate force from N. and N.E., temperature was rather low, and the weather generally dull. During the day the belt of high pressure extended in a south-easterly direction over Eastern England and the North Sea.

October 2nd–8th.—During the 2nd the area of high pressure spread over most of Western Europe, though its centre still continued to move south-eastwards towards Germany. In Ireland, however, the barometer had begun to fall with the approach of a depression from the S.W., the centre of which was, as yet, apparently at a considerable distance from the coast. With these conditions the wind over the British Isles veered generally to S.E., and in the West blew freshly, with heavy rain. At 8 a.m. on the 3rd, the centre of the depression seemed to be not very far from Valencia, and a recovery of pressure began in Ireland, although in Scotland the fall continued till the latter part of the 4th, the depression skirting the high-pressure area and travelling northwards. From the 4th to the 8th but little change occurred; the high pressure remained over Central Europe, while an area of low pressure continued to the westward of Ireland, the barometer over the British Isles keeping rather low, but steady; the wind was Southerly, and in the West it occasionally blew freshly. On the morning of the 8th, however, a fresh fall of pressure began at Valencia, and in the course of the day this became general over Great Britain.

October 9th–14th.—A series of depressions now began to arrive on our western coasts. The centre of the first reached the neighbourhood of the N. of Ireland on the morning of the 9th, and from thence it travelled quickly across Scotland and the North Sea to the Baltic, where it lay on the following morning. By that time the second depression lay not far from the Hebrides, but as it was travelling in a northerly direction, it passed away without greatly influencing either pressure or wind, and was followed the same day by a small subsidiary disturbance which moved over the N. of Scotland. A rapid fall of the barometer then ensued, and on the 11th a deep depression (No. L.) passed north-eastwards over Ireland and Scotland, accompanied by strong Southerly and South-westerly gales all over the kingdom. A partial but general recovery of pressure followed its passage, and the rise in the North was, for a time, very rapid. This, however, did not continue long and on the 13th, by which time the depression had reached Lapland, a fresh fall began at all the northern and western stations, owing to the arrival of some small subsidiary depressions, one of which travelled across Northern Scotland during the 13th, while another passed not far from Valencia early on the morning of the 14th, and, moving in a north-north-easterly direction, crossed over Scotland during the afternoon. At the close of the 14th pressure was again increasing in all parts of the British Isles. Throughout the period the highest pressures had remained over South-eastern Europe, much rain had fallen over Great Britain and Ireland, and at the close, weather still continued very unsettled.

October 15th–27th.—A change in the relative distribution of pressure now began to take place. The area of lowest pressure was still to the westward of Ireland, and a large depression appeared to be passing northwards, at some distance from the coast, causing the barometer to fall over the British Isles, especially in the West, and producing strong Southerly winds and gales all along the western coasts; but the area of highest pressure had shifted northwards from south-eastern Europe, and on the 16th a well-defined anticyclone had become developed over Finland and the Gulf of Bothnia, while at the same time a steady increase of pressure commenced over the United Kingdom. The anticyclone moving a little to the Southward, remained over the Baltic and Western Russia till the 20th, when it shifted to the westward, so that on the 21st its centre lay over Scandinavia; but on the 23rd it returned again to the eastern shore of the Baltic, spreading out over Russia, and from that date till the 27th pressures were very high and uniform all over North-western Europe, the highest readings being generally in the neighbourhood of the Baltic. Meanwhile the increase of pressure over the British Islands had gone on steadily till the 21st, the rise being greatest in the N., but between the 21st and 27th the barometric changes were but slight. Moderate to light Southerly and South-easterly winds prevailed generally till the 18th, when a very shallow depression reached the English Channel and the Bay of Biscay, in consequence of which the winds on the western coasts became Northerly, and those over Southern England Easterly. The latter direction became general on the 20th, and continued till the 23rd, when the wind again veered to the Southward, and it continued to blow from that quarter till the 27th, with low temperature, and dull, but dry, weather.

October 28th–31st.—The anticyclone which had remained so long over North-western Europe now travelled to the south-eastward, and disappeared in the neighbourhood of the Black Sea, while a new area of high pressure began to develop itself off the coast of Ireland. Simultaneously with this change a very deep depression arrived over the northern part of Scandinavia, and travelling south-eastwards lay with its centre over Finland on the 31st. Under its influence the wind over the United Kingdom, which at first was light and variable, became Westerly and Northerly, and on the 29th and 30th it blew very strongly in the N. of Scotland, with fine cold weather over the greater part of the British Isles. On the 31st the barometric gradients were very steep over the North Sea, and the Northerly wind on its eastern shores was very strong; but over Great Britain the gradients were moderate, and the wind light to fresh in force.

November 1st–4th.—The area of high pressure off our western coast advanced first in an easterly direction over Ireland, and then to the S.E. over the Channel and North-western France, the wind at the same time backing from N. to W. over Great Britain, but continuing to blow from E. over Southern France. On the 4th, however, a very general rise of pressure took place over the British Isles, the anticyclone again stretched up an arm northwards, over England and Ireland, and readings being very uniform, the winds became light and variable. During these four days two areas of low pressure existed over Europe, one in the region of the Baltic, causing strong Northerly winds to blow over Sweden, and the other in Southern Europe in the neighbourhood of the Adriatic.

November 5th–7th.—During the 5th a moderately deep depression advanced upon the Norwegian coast from the N.W., and passing across Norway during the night, its centre lay in the neighbourhood of Copenhagen on the morning of the 6th. This disturbance caused a slight fall of pressure at our northern stations, but did not much affect the barometer on the western and southern coasts, although the centre of the high pressure area shifted again to the westward of Ireland, and the winds over the United Kingdom and the North Sea veered to the Northward, with colder weather. Over Southern Scandinavia and the eastern shores of the North Sea, Easterly and Northerly gales blew during the 6th and 7th., the depression remaining over Northern Germany throughout the 7th and then travelling southwards, and gradually filling up.

November 8th–10th.—Concurrently with the westward movement of the area of high pressure, which had existed in the vicinity of Great Britain since the end of October, a new anticyclonic system developed itself over Northern Europe, and on the 8th, high pressures, exceeding 30·8 inches, were recorded near the Gulf of Bothnia. The region of least pressure was in the S. of Europe, and consequently Easterly winds became general, and over Great Britain low temperature with fine weather prevailed. These conditions, however, did not last very long, as pressure gradually decreased in the North, while it remained steady over Great Britain, and increased in the S. of France and in this way, by the morning of the 10th, a very uniform distribution of readings was brought about. Later in the day, however, a rapid fall set in on our western coasts, the wind, at the same time, veering to S. and increasing in force, and by midnight the decrease had extended to all parts of the kingdom.

November 11th–12th.—During the night of the 10th a deep depression passed northwards, at some distance to the westward of Ireland, but occasioning strong Southerly gales all along the western coasts. The decrease of pressure went on throughout the 11th, very briskly in the West and South-west, and the wind, backing to S.E. and E., continued very strong in the S.W. of England and Ireland, and on the N.W. coast of France. The centre of the disturbance whose approach was thus indicated reached the entrance to Saint George's Channel on the morning of the 12th, when the winds over the S.W. of England had veered to S.W., although over other parts of the country strong Easterly and South-easterly gales were blowing. An area of high pressure lay over Germany, and another over Northern Scandinavia, and during the day the position of the main disturbance did not alter very much, but a small subsidiary (No. LIII.) passed in a north-easterly direction over Northern France, causing very strong gales to blow on its southern side. The approach of the disturbance was accompanied by a very general rise of temperature, and by a general, and in places heavy, fall of rain.

November 13th–15th.—On the morning of the 13th, the secondary depression was rapidly filling up over Belgium, and a slight recovery of pressure was taking place all over the British Isles, more especially in the South and West; but the general distribution of pressure remained unaltered, and while South-westerly winds were blowing in Belgium, and Southerly winds in the Bay of Biscay, Easterly winds continued generally over the British Isles, and blew on the N. and E. coasts with the force of a gale. These conditions continued till the 14th, when pressure gave way again in the West and North, and to a slight extent in the South and East also. By the evening a fresh depression (No. LIV.), travelling in a northerly direction, had reached the vicinity of the Irish coast; a general veering of the wind took place, accompanied by a large and rapid rise of temperature (see Plate LXIV.), and strong Southerly and Easterly gales were experienced over the western and northern portions of the kingdom during the latter part of the 14th and early part of the 15th. This disturbance was succeeded by a partial recovery of pressure, and by the close of the 15th the wind generally had fallen light, and temperature become somewhat lower.

November 16th.—A small and very shallow depression now reached the S.W. of England, and passed northwards, along Saint George's Channel, during the day. The wind circulated around it, *backing* from E. to W. and S.W. over Ireland, while it *veered* from E. to S.W. over England and Wales: the force, however, nowhere amounted to a gale. At Aberdeen on this day a remarkable oscillation of temperature took place, a rapid fall, followed by a still more rapid rise, accompanying a *veering* of of the wind from S. to S.E. (see Plate LXIV.).

November 17th–22nd.—A new system of high pressure now appeared over Scandinavia, and at the same time a general rise of the barometer commenced over the British Isles, and continued without interruption till the 18th, the winds being generally moderate from S.W., although in the extreme North they were fresh or strong from S.E. On the afternoon of the 18th, pressure again gave way in the North, and a depression, moving slowly to the south-eastward, reached the N. of Scotland during the night; with the advance of this depression the winds over Great Britain and Ireland veered to the N.W., while on the eastern shore of the North Sea they blew from E. and S.E. On the 20th, however, the disturbance reached the Netherlands, and quickly filled up while the recovery of pressure over the British Isles recommenced, and continued without interruption till the 22nd. The centre of the high pressure area had in the meantime shifted to the eastern shore of the Baltic; on the 21st it stretched out an arm over Sweden, but after a day or two it once more moved eastwards over Russia, and gradually dispersed.

November 23rd–30th.—The recovery of pressure had now ceased, and a fresh general fall commenced over the British Isles. A depression was passing northwards, at some distance to the westward of Ireland, and under its influence the Southerly winds, which had freshened on the western coasts on the 22nd, increased to a gale all over the western and northern portions of the kingdom. On the 24th the wind had moderated, although the barometer still continued to fall, and on the 25th the centre of a new shallow depression (No. LVI.) reached the entrance to the Channel and travelled North-eastwards across Central England to the North Sea, fresh Easterly winds blowing in its front, and Southerly and South-westerly winds in its rear. Only a slight recovery of pressure ensued, and till the end of the month the barometer remained low, with only some slight fluctuations, due to some small secondary disturbances which crossed the country, but which were unaccompanied by anything like a strong wind.

December 1st–2nd.—December opened with very unsettled weather. The highest pressures were over South-eastern Europe, while in the West the barometer was very low and continued to fall. During the 1st a large and rather deep depression crossed over England, causing a strong South-westerly gale to blow at the mouth of the Channel, and bringing with it a general rise of temperature. This was followed by a slight recovery of pressure on the 2nd, by which time the disturbance had reached the North Sea, but by noon of that day the mercury was again falling in the West, and very soon the fall had extended to all parts of the kingdom. Over the northern half of the country the wind blew strongly from the Eastward, while in the South-west a Southerly and South-westerly gale was blowing.

December 3rd.—The centre of a depression (No. LVII.) now reached the Irish coast, and very strong gales were experienced from the Southward in the South and West and from E. and S.E. over Scotland and Northern England. This depression passed up the western coast during the day, but was not followed by a recovery of pressure except in the South-west; even there the rise was very temporary, and during the latter part of the 3rd it was once more succeeded by a rapid fall. In the meantime an increase of pressure had been going on over Scandinavia, where an area of relatively high readings had become established, and in consequence gradients over Great Britain had become much steeper.

December 4th–7th.—Early on the morning of the 4th the centre of a very deep depression (No. LVIII.) reached the S.W. of England, travelling in a north-north-easterly direction. It was accompanied by violent Southerly gales over our southern coasts and France, and by Easterly gales over Scotland, and on the eastern shores of the North Sea, the barometer, which was everywhere very low, falling nearly to 28 inches in the S.W. and W. of England. As the disturbance moved northwards its path became more Westerly, owing to the higher pressure to the North-east, and a rapid rise of the barometer took place in its rear, although elsewhere the recovery was very slight. But again the rise was only temporary, and on the 5th the mercury fell in all parts of the kingdom, but most rapidly in the S.W. of England. At 8 a.m. a

South-westerly gale was blowing in the Bay of Biscay; the centre of the depression already referred to lay to the N.W. of the Hebrides, and a new depression (No. LIX.) travelling in a northerly direction, had reached the entrance to the Channel. By the evening the centre of the latter was not far from Holyhead, and the wind was circulating around it very distinctly; in its rear it had veered to W. and increased to a strong gale; on the S.E. coast of England it was South-westerly and Southerly, on the N.E. coast South-easterly, Easterly over N. Ireland, and North-westerly over S. Ireland. The barometer was then rising briskly in the South and West, although over Northern England and Scotland it still continued to fall. At 8 a.m. on the 6th the centre had advanced to the N. of Scotland, and, except in that district, the wind had become generally Westerly; the rise of the barometer had also extended to the N. of the British Isles, although it was again checked in the South by the appearance of a small and shallow subsidiary disturbance which passed quickly eastward up the Channel on the 7th, but unaccompanied by strong winds, and by the evening of that day a brisk recovery of pressure was in progress all over the country.

December 8th–11th.—The high pressure still continued over North-western Russia, but the lowest readings were now found in a belt stretching to the N.N.W. from the Netherlands across the North Sea, the increase of pressure, which was still in progress in all parts of the British Islands, developing a second area of relatively high pressure near the entrance to the English Channel. The wind, which remained Westerly over the northern portion of the kingdom, veered to the Northward in the South, and the weather became more settled. During the next three days these conditions continued with but little alteration, except that the southern area of high pressure moved slowly eastward over the Channel and N.W. France, the wind backing to the Southward. On the 11th, however, a fresh decrease of pressure commenced, and by the close of the day it had become general all over the country.

December 12th–18th.—The southern area of high pressure spread out over Europe and, uniting with the northern system, formed a band of high pressure covering the greater part of the Continent, while at the same time a fresh series of depressions began to arrive on our western coasts from the Atlantic. The first of these reached the N. of Scotland on the 12th, but quickly passed away to the northward, and was followed next morning by another disturbance which, arriving off the coast of Ireland, caused for a short time a strong Southerly wind to blow over the western portion of the kingdom. This depression, however, filled up over Ireland in the course of the day, the barometer rising briskly in the South-west, and also to a slight extent all over the British Isles. In the West the increase of pressure was of brief duration, and the barometer was again falling at Valencia by mid-day of the 14th, a belt of low pressure continuing to exist over the ocean to the westward of our Islands. On the 18th a small subsidiary depression moved south-eastwards over the south-western portion of the kingdom, and with this the wind, which had hitherto been generally Southerly, became Easterly over all the northern portion of England and Scotland, but its force was nowhere very great.

December 19th–24th.—The barometer, though low, had for a short time remained tolerably steady in the West, but it now began to fall again there rapidly, while the decrease which had been steadily going on over other portions of the kingdom continued. A deep depression (No. LX.) was approaching the S.W. coast, and the track it followed on reaching our shores was remarkable. Its centre reached the entrance to Saint George's Channel on the evening of the 19th, and remained there for several hours. It then moved in a south-easterly direction to the English Channel, and on the evening of the 20th, was not far from the Isle of Wight; thence it travelled very slowly northward, over the Midland Counties, where it lay on the morning of the 21st, to Scotland, and was located in the neighbourhood of the Firth of Forth on the morning of the 22nd; the direction of its track then shifted to N.W., passing across Scotland to the W. coast by 8 a.m. on the 23rd; and thence once more it moved to the southward, and lay over Northern Ireland on the 24th. By that time, however, pressure was rising generally and the depression was fast filling up. Throughout the whole of this period the highest pressure was over Scandinavia, and gradients being very steep, a strong Easterly gale blew over the northern portion of the kingdom, at times with great severity, while in the South. the wind veered as the centre of the disturbance passed eastward and northward, and decreased in strength. Temperature was low, and the weather generally very wet and unsettled.

December 25th–26th.—The general distribution of pressure had not altered very much; the lowest readings were found over Southern England and Northern France and the highest over the Baltic, and the barometer was rising generally. Easterly winds, with cold fine weather, were general over England, and intense cold prevailed over Scandinavia. On the 26th the anticyclone moved somewhat to the westward, and the highest pressures were found over Denmark, but a general decrease of pressure had then set in over Great Britain and Ireland, the wind veering to the Southward and blowing a gale, at first only in the South-west, but later in the day on the western and northern coasts also.

December 27th–31st.—The anticyclone had now reached N. Germany, and was travelling towards Southern Europe. A large disturbance lay off our western coasts, and Southerly winds were therefore still general, although in most places they had very much decreased in force. By the evening the centre of the disturbance had reached the N. of Ireland, and during the night it passed in a north-easterly direction across Scotland, its centre being near the Orkneys at 8 a.m. on the 28th; during its passage across the British Isles the wind veered to the S.W., and temperature rose considerably. The movements of the barometer now became very irregular; another depression reached the English Channel during the 29th, accompanied by a very strong Southerly gale, but it passed quickly over England during the night, and was followed by a partial recovery of pressure. Early on the 30th, a fresh and very rapid fall began in the West and quickly extended to all stations, and on the morning of the 31st, the centre of a deep depression (No. LXI.) lay near the N. of Ireland. With this disturbance strong Southerly and South-westerly gales were experienced over the greater part of the British Isles, but in the N. of Scotland a North-easterly gale blew with great force, and the year closed with the weather generally in a most unsettled condition.

SECTION II.

TABLE OF CYCLONIC SYSTEMS—OCTOBER-NOVEMBER, 1876.

NATURE OF CHARACTERISTICS OBSERVED.	No. L. **October 11-12.**	No. LI. **October 28-31.**	No. LII. **November 5-7.**
Form	Oval	Apparently nearly circular	Oval
Size	Large	Very large	Large
Depth	Deep	Deep	Moderate
Where first Observed	Off the W. coast of Ireland	Over Northern Scandinavia	Over Norway
Direction of Motion	North-easterly	Probably South-easterly	South-easterly and then Southerly
Rate of Motion	Moderate	Very slow	Slow
Regions passed over by Steepest Gradients.	Ireland, northern parts of Great Britain, and the North Sea.	Scandinavia and North Sea	Southern Scandinavia and Denmark
Termination	Disappeared over Lapland	Passed away over Northern Russia	Filled up over Southern Europe
Time under Observation	1 day	About 3 days	About 2 days
Accompanying Winds	Strong Southerly winds, becoming Westerly in the N. of Scotland.	Northerly and North-westerly	Northerly, veering to E.
„ **Weather**	Overcast or cloudy, with a great deal of lightning. Heavy hail-storm at Holyhead.	Snow and hail in N. of British Isles, but fine cold weather in the southern portion.	Very cold, with heavy snow at the eastern stations.
„ **Rainfall**	General, but greatest in the N. of Scotland.	Not heavy, and confined to the northern stations.	Slight, but pretty general
REMARKS	For some days prior to the arrival of this depression, a series of small disturbances, which were unaccompanied by very strong winds, had reached our northern coasts, but the steady fall of the barometer, which had been in progress since the 8th, was only very slightly interrupted by their passage.	Pressure was high over the western portions of the British Isles at the time when this depression reached Northern Europe. As only a small portion of it came within the area covered by our reports, exact details as to its form, &c. cannot be given, but as regards the British Isles, its effect was confined mainly to the northern stations, where alone the wind reached the force of a gale. The track of the depression lay outside the limits of the chart, and therefore cannot be shown.	The track of this depression was unusual; reaching the Norwegian coast from the Northward, on the afternoon of the 5th, it passed down over Denmark and Germany, skirting the high pressure in the West, and filled up over Southern Europe. The winds over Great Britain were not particularly strong.

SECTION II.

TABLE OF CYCLONIC SYSTEMS—NOVEMBER, 1876.

No. LIII. **November 12-13.**	No. LIV. **November 14-15.**	No. LV. **November 16-17.**	No. LVI. **November 25-26.**
Circular - - - - - -	Nearly circular - - - -	Oval - - - - - -	Nearly circular at first, but becoming elongated.
Large - - - - -	Large - - - - -	Large - - - - -	Large.
Deep - - - - -	Moderate - - - - -	Shallow - - - - -	Shallow.
On the N.W. coast of France - -	S.W. of Ireland - - - -	Mouth of the Channel - - -	S.W. of England.
Easterly - - - - -	Northerly - - - - -	Northerly - - - -	Northerly.
Moderate - - - - -	Slow - - - - - -	Moderate - - - - -	Slow.
The Channel and Northern France -	The British Isles - - -	The British Isles - - -	S.E. of England and the North Sea.
Filled up over Belgium - - -	Disappeared to the N.W. of Scotland -	Disappeared to the Northward -	Travelled away Northward.
About 24 hours - - - -	About 36 hours - - - -	1 day - - - - - -	1 day.
Strong from E. and S.E. over Great Britain, but from S.W. in France.	Strong South-easterly and Southerly winds.	Circulated around the centre of the depression, but was nowhere very strong.	South-easterly and Easterly in the East and North, but Westerly in the South-west.
Unsettled and wet, with snow in the South.	Warm, dull and wet - - -	Overcast and wet - - -	Very unsettled, dull, and wet.
General over the British Isles; very heavy in the South-west.	Very general and heavy, especially in the North. Nearly 2 inches fell at Aberdeen.	Rain fell at most places, but most heavily in the N. of Ireland.	Rather general and heavy.
This depression was subsidiary to a larger one which had existed for some time near our Western coasts, and had caused strong Southerly and South-easterly winds to blow over the British Isles.	For some days before this depression approached us, a large area of low pressure had existed on our Western coasts. The centre of the disturbance appears to have kept to the Westward of Ireland, and therefore it was only in the South-west that the wind veered to the Westward of S., with the passage of the centre Northward.	This was a shallow but well developed depression, which skirted the high-pressure area lying over North-western Europe, and passed Northward up St. George's Channel; the gradients, however, were not steep and the winds nowhere very strong.	This disturbance was only one of a series which reached the British Isles at this time, preceding and accompanying the breaking up of the area of high pressure which had existed for some time over North-western Europe.

TABLE OF CYCLONIC SYSTEMS—DECEMBER, 1876.

NATURE OF CHARACTERISTICS OBSERVED.	No. LVII. December 2-3.	No. LVIII. December 4.
Form	Circular	Nearly circular
Size	Large	Large
Depth	Deep	Deep
Where first Observed	Off the Irish Coast	Over the Bristol Channel
Direction of Motion	Northerly	North-north-easterly at first, then North-westerly
Rate of Motion	Slow	Slow
Regions passed over by steepest Gradients	The British Isles and the N. of France	Northern France and the Channel
Termination	Disappeared to the Northward	Travelled away to the N.W.
Time under Observation	One day	One day
Accompanying Winds	South-westerly in the South, Southerly in the East, and Easterly in the North; strong.	At first circulating around the depression, but becoming South-westerly over England and South easterly over Scotland as it passed away.
„ **Weather**	Dull and wet	Overcast, squally, and wet
„ **Rainfall**	Very general and heavy	Very general
REMARKS	A large and moderately deep depression, accompanied by strong Southerly and Easterly winds, had passed across England during the 1st, and was filling up over the North Sea as this disturbance approached our Western coasts. A system of relatively high pressure had again appeared over Scandinavia, in consequence of which the track of the new depression was deflected to the Northward.	The preceding disturbance had hardly got clear of the British Isles before the approach of this one was felt in the South-west. At first its track was a little to the E. of N., the centre lying over the Bristol Channel at 8 a.m., 4th, and near Shields in the evening, but its further progress in that direction was checked by the high pressure over Scandinavia, and deviating to the N.W. it disappeared over the Atlantic.

Table of Cyclonic Systems—December, 1876.

No. LIX. **December 5-6.**	No. LX. **December 19-24.**	No. LXI. **December 30-31.**
Circular	Nearly circular	Apparently nearly circular.
Large	Very large	Large.
Deep	Moderate	Deep.
Over the Bay of Biscay	S.W. of Ireland	West of Ireland.
Northerly	South-easterly, then Northerly, then to the W.N.W., and then to the S.W.	North-easterly.
Slow	Slow	Very slow.
England and the North Sea	The Eastern and Northern portions of the British Isles, and the North Sea.	Great Britain and the North Sea.
Passed away to the Northward	Filled up over Ireland	Travelled away over Finland.
About 36 hours	Five days	About one day.
At first Southerly and South-easterly, but veering to W. as the centre passed Northward.	Strong Easterly gale in the North, South-easterly and Southerly winds on the Eastern coasts and Westerly winds in the South.	South-westerly gales over the greater part of the British Isles, but a strong Easterly gale in the extreme North.
Overcast and wet in front of the centre but finer weather in the rear.	Cold and very wet and unsettled	Very wet and unsettled; temperature rather high for the time of year.
General and in places heavy	Very general and heavy	Very general, but heaviest in the S. of Ireland.
This depression lay off our S.W. coasts on the morning of the 5th and passed up St. George's Channel during the day; next morning its centre was near Aberdeen, and from thence it travelled to the N.N.W. and disappeared over the sea. The steepest gradients were to the E. and N.E. of the centre, where they were influenced by the relatively high pressure still existing over North-western Europe.	The arrival of this depression was preceded by a shallow disturbance which passed over Southern England on the 18th. The movement of the system was slow and very peculiar, returning upon itself to near the point where it had first appeared, after having made a complete circuit of the British Isles. A small depression passed over central Europe on the 22nd and a small subsidiary disturbance reached the French coast on the 23rd, but during the whole time an area of high pressure lay over Sweden and Finland, causing very steep gradients over the North Sea and our Eastern coasts.	For several days the area of high pressure over Scandinavia had been breaking up and travelling to the Southward, the movement being accompanied by the arrival of a succession of disturbances on our coasts which caused very unsettled and disturbed weather to prevail all over the kingdom.

TABLES OF GALES.

No. 9. (Cyclonic System No. L.)

Stations.	Velocity 30-40 Miles per Hour.		Velocity Exceeding 40 Miles per Hour.				Velocity Fell below 30 Miles per Hour.		Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity.			Remarks.
	Com-menced.	Direction of Wind.	Com-menced.	Direction of Wind.	Mean Vel.	Duration in Hours.	Ended.	Direction of Wind.		Hour.	Direction of Wind.	Velocity.	
Oct. 11-12, 1876.													
Sandwick	1 a.m. (12th).	S.W.byW.	2 a.m. (12th).	W. by N.	51	6	1 p.m. (12th).	W.	12	3 a.m. (12th).	W.N.W.	62	—
Aberdeen	3 p.m. (11th.)	S.E. by S.	—	—	—	—	6 p.m. (11th).	S.S.E.	3	4 p.m. (11th).	S.S.E.	37	—
Glasgow -	1 a.m. (12th).	W.S.W.	—	—	—	—	2 a.m. (12th).	W.	1	1 a.m. (12th).	W.S.W.	32	—
Alnwick Castle.	1 a.m. (12th).	S.W. by S.	2 a.m. (12th).	S.W.byW.	42	3	5 a.m. (12th).	W. by S.	4	3 a.m. (12th).	W.S.W.	45	Wind rose to 32 miles at 7 a.m. 12th.
Seaham -	Midnt. (11th).	S. by W.	—	—	—	—	2 a.m. (12th).	S.W.by S.	2	1 a.m. (12th).	S.	33	—
Stony-hurst.	10 a.m. (11th).	S. by E.	2 p.m. (11th).	S.	42	1	4 p.m. (11th).	W. by N.	6	2 p.m. (11th).	S.	42	—
Holy-head	1 a.m. (11th).	S. by W.	4 a.m. (11th). 7 a.m. (11th).	S. S.	44 46	2 15	10 p.m. (11th).	S.W.byW.	21	Noon (11th).	S.S.W.	58	—
	9 a.m. (12th).	S.S.W.	—	—	—	—	2 p.m. (12th).	S. byW.	5	10 and 11 a.m. (12th).	S. by W.	37	—
Valen-cia.	10 p.m. (10th).	S. by W.	—	—	—	—	3 a.m. (11th).	S.S.W.	5	2 a.m. (11th).	S.W. by S.	39	—
	—	—	10 a.m. (11th).	S.W.byW.	50	2	2 p.m. (11th).	W. by S.	4	11 a.m. (11th).	W.S.W.	53	—
	Midnt. (11th).	S.W.	5 a.m. (12th).	S.S.W.	42	7	6 p.m. (12th).	S.S.W.	18	7 and 8 a.m. 9 a.m. (12th).	S.S.W. S.W. by S.	44	—
Falmouth	5 a.m. (11th).	S.byW.	7 a.m. (11th). 4 p.m. (11th).	S. by W. S.W.	43 40	5 1	Midnt. (11th).	S.W.	19	8 and 9 a.m. (11th).	8 a.m. S. by W. 9 a.m. S.	44	—
Kew	2 p.m. (11th.)	S.S.W.	—	—	—	—	3 p.m. (11th).	S.S.W.	1	2 p.m. (11th).	S.S.W.	33	—

No. 10. (CYCLONIC SYSTEM, No. LI.)

Stations.	Velocity 30-40 Miles per Hour.		Velocity Exceeding 40 Miles per Hour.				Velocity Fell below 30 Miles per Hour.		Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity.			Remarks.
	Commenced.	Direction of Wind.	Commenced.	Direction of Wind.	Mean Vel.	Duration in Hours.	Ended.	Direction of Wind.		Hour.	Direction of Wind.	Velocity.	
Oct. 28-31, 1876.													
Sandwick	4 p.m. (28th).	W.byS.	Midt. (28th).	W.S.W.	44	5	6 p.m. (31st).	N.N.W.	74	1 a.m. (30th).	N.W.byW	62	The velocity of 40 miles per hour was also slightly exceeded at 3 a.m. and 8 and 9 a.m. on 31st.
			6 a.m. (29th).	W. by N.	41	3							
			10 a.m. (29th).	W.N.W.	51	21							
			8 a.m. (30th).	W.N.W.	43	18							
Aberdeen.	11 a.m. (30th).	W.N.W.	—	—	—	—	3 p.m. (30th).	N.W.byW	4	Noon (30th).	N.W.byW	38	—
Alnwick Castle.	3 a.m. (29th).	W. by N.	5 a.m. (29th).	W.	47	2	10 a.m. (29th).	W.	7	6 a.m. (29th.)	W.	50	—
Holyhead-	2 p.m. (30th).	N.N.W.	—	—	—		4 a.m. (31st).	N. by E.	14	6 and 7 p.m. (30th.)	N. by W.	37	—
	5 a.m. (31st).	N.N.E.	—	—	—	—	11 a.m. (31st).	N.N.E.	6	6 a.m. (31st).	N. by E.	35	—
										7 a.m. (31st).	N.N.E.		
										8 a.m. (31st).	N.N.E.		

No. 11. (CYCLONIC SYSTEM, No. LIII.)

Stations.	Velocity 30-40 Miles per Hour.		Velocity Exceeding 40 Miles per Hour.				Velocity Fell below 30 Miles per Hour.		Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity.			Remarks.
	Commenced.	Direction of Wind.	Commenced.	Direction of Wind.	Mean Vel.	Duration in Hours.	Ended.	Direction of Wind.		Hour.	Direction of Wind.	Velocity.	
Nov. 11-13, 1876.													
Aberdeen.	8 a.m. (12th).	S.E. by E.	—	—	—	—	11 a.m. (12th).	E.S.E.	3	8 a.m. (12th).	S.E. by E.	35	—
	4 p.m. (12th).	E.S.E.	9 p.m. (12th).	S.E. by E.	42	2	3 p.m. (15th).	E. by S.	23	9 and 10 p.m. (12th).	S.E. by E.	42	
Alnwick Castle.	7 a.m. (12th).	E.S.E.	7 p.m. (12th).	E.S.E.	42	1	3 p.m. (13th).	E.S.E.	32	7 p.m. (12th).	E.S.E.	42	Wind also rose to 40 miles at 8 a.m. 13th.
			9 p.m. (12th).	S.E. by E.	41	1							
			11 p.m. (12th).	E.S.E.	41	2							
Seaham -	2 p.m. (12th).	E.S.E.	—	—	—	—	4 p.m. (13th).	E.	26	2 p.m. (12th).	E.S.E.	36	Traces for the 26 hours preceding 2 p.m., 12th, are lost.
										8 p.m. (12th).	E. by S.		
Holyhead.	8 p.m. (11th).	E.	1 a.m. (12th).	E. by N.	46	14	4 p.m. (13th).	E. by S.	44	8 and 9 a.m. (12th)	E.	51	Clock stopped between 7 and 9 a.m. 13th, but probably the wind slightly exceeded 30 miles per hour.
			7 p.m. (12th).	E.	42	4							
Falmouth	7 p.m. (10th).	S.S.E.	1 a.m. (11th).	S.S.E.	48	24	3 a.m. (12th).	E.S.E.	32	8 p.m. (11th).	E. by S.	58	—
Yarmouth.	2 p.m. (11th).	S. by E.	4 p.m. (11th).	S.E. by S.	50	26	—	—	—	9 a.m. (12th).	E.S.E.	65	No trace from 6 p.m. 12th, to Noon 13th. At 5 p.m. 12th, the wind was blowing with the velocity of about 45 miles per hour.

No. 12. (Cyclonic System, No. LIV.)

Stations.	Velocity 30-40 Miles per Hour.		Velocity Exceeding 40 Miles per Hour.				Velocity Fell below 30 Miles per Hour.		Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity.			Remarks.
	Commenced.	Direction of Wind.	Commenced.	Direction of Wind.	Mean Vel.	Duration in Hours.	Ended.	Direction of Wind.		Hour.	Direction of Wind.	Velocity.	
Nov. 14-15 1876.													
Sandwick	10 a.m. (14th).	E.S.E.	7 p.m. (14th).	E.S.E.	46	10	10 a.m. (15th).	S.E. by S.	24	1 a.m. (15th).	E.S.E.	52	Wind rose to a little more than 40 miles per hour at 5 p.m. 14th, and also at 7 a.m. 15th.
Aberdeen	5 a.m. (14th).	S.E. by E.	8 p.m. (14th).	S.E. by E.	43	3	3 a.m. (15th).	S.E. by S.	22	8 p.m. (14th).	S.E. by E.	44	—
Holyhead.	7 a.m. (14th).	E.	8 a.m. (14th).	E.	40	2	Noon (14th).	E. by S.	5	8 & 9 a.m. (14th).	E.	40	—
	8 p.m. (14th).	S. by E.	10 p.m. (14th).	S.	44	3	6 a.m. (15th).	S.	10	11 p.m. (14th).	S.	48	—
Valencia	9 p.m. (14th).	S.W.byS.	11 p.m. (14th).	S.W.byW.	43	6	8 a.m. (15th).	S.W.b.W.	11	11 p.m. (14th).	S.W.b.W.	47	—

No. 13. (Cyclonic System, No. LVII.)

Dec. 2-4, 1876.													
Sandwick	1 a.m. (3rd)	E. by N.	8 a.m. (3rd)	E. by S.	49	29	—	—	36	5 p.m. (3rd).	E.	58	Wind did not fall below 30 miles, this depression being closely followed by cyclonic system No. LVIII.
Aberdeen.	7 p.m. (2nd)	E. by N.	1 a.m. (3rd).	E. by S.	47	21	10 p.m. (3rd).	S.E.	27	8 a.m. (3rd).	E.	55	
	6 a.m. (4th).	S.E. by E.	—	—	—	—	10 a.m. (4th).	E. by S.	4	8 & 9 a.m. (4th).	E.S.E.	34	
Glasgow	9 p.m. (2nd).	E.N.E.	7 a.m. (3rd).	N.E.byE.	40	1	11 a.m. (3rd).	N.E.byE.	14	7 a.m. (3rd).	N.E.byE.	40	
Alnwick Castle.	9 p.m. (2nd).	E.	1 a.m. (3rd). 3 a.m. (3rd). 5 a.m. (3rd).	E.S.E. E.S.E. E.S.E.	43 41 41	1 1 1	9 a.m. (3rd).	S.E.byE.	12	1 a.m. (3rd).	E.S.E.	43	
Seaham -	Midt. (2nd).	E.	4 a.m. (3rd).	E. by S.	40	1	6 a.m. (3rd).	S.S.E.	6	4 a.m. (3rd).	E. by S.	40	
Stonyhurst.	Midt. (2nd).	E.	—	—	—	—	2 a.m. (3rd).	E. by S.	2	1 a.m. (3rd).	E. by S.	34	
Holyhead	7 p.m. (2nd).	E.	8 p.m. (2nd). 8 a.m. (3rd).	E. S.S.E.	48 47	4 6	6 p.m. (3rd).	S. by W.	23	10 p.m. (2nd).	E. by S.	50	
Falmouth	3 p.m. (2nd).	S. by W.	Midt. (2nd).	S. by E.	43	9	4 p.m. (3rd).	S.S.W.	25	3 a.m. (3rd).	S. by W.	46	

No. 14. (CYCLONIC SYSTEM, No. LVIII.)

Stations.	Velocity. 30-40 Miles per Hour.		Velocity Exceeding 40 Miles per Hour.				Velocity Fell below 30 Miles per Hour.		Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity.			Remarks.
	Commenced.	Direction of Wind.	Commenced.	Direction of Wind.	Mean Vel.	Duration in Hours.	Ended.	Direction of Wind.		Hour.	Direction of Wind.	Velocity.	
Dec. 4-5, 1876.													
Sandwick.	1 p.m. (4th).	E.S.E.	2 p.m. (4th).	E. by S.	44	5	8 a.m. (5th).	E. by S.	19	3 p.m. (4th).	E. by S.	47	
			8 p.m. (4th).	E.S.E.	44	4							
Aberdeen.	—	—	11 a.m. (4th).	E. by S.	47	5	5 p.m. (4th).	S.E.	6	2 p.m. (4th).	E.	52	
Holyhead	6 p.m. (4th).	S.W.byW.	—	—	—	—	Midt. (4th).	S.W.byW.	6	6, 7, and 10 p.m. (4th).	S.W.byW.	36	Wind also slightly exceeded 30 miles at a few hours on evening of the 3rd and morning of the 4th.
Falmouth.	—	—	5 a.m. (4th).	W. by N.	45	2	10 a.m. (4th).	W. by N.	5	5 a.m. (4th).	W. by N.	48	
	4 p.m. (4th).	W.S.W.	—	—	—	—	11 p.m. (4th).	S.W.	7	6 p.m. (4th).	S.W.byW.	36	
Kew	7 a.m. (4th).	S.	11 a.m. (4th).	S.S.W.	42	1	1 p.m. (4th).	S.W.	6	11 a.m. (4th).	S.S.W.	42	
Yarmouth.	2 a.m. (4th).	S.E.	4 a.m. (4th).	S.E. by S.	40	1	6 a.m. (4th).	S. by W.	4	4 a.m. (4th).	S.E. by S.	40	
	9 a.m. (4th).	S.S.E.	1 p.m. (4th).	S. by E.	45	1	3 p.m. (4th).	S. by W.	6	1 p.m. (4th).	S. by E.	45	Wind rose to 40 miles at 6 p.m. 4th, but the velocity was only 24 miles at 5 p.m. and 28 miles at 7 p.m.

No. 15. (CYCLONIC SYSTEM, No. LX.)

Dec. 19-24, 1876.													
Sandwick.	2 a.m. (20th).	E. by N.	7 a.m. (20th).	E.	42	16	6 a.m. (21st).	E. by N.	28	2 p.m. (20th).	E.	46	
	4 p.m. (21st).	E.	Midt. (21st).	E.	49	50	7 a.m. (24th).	E.S.E.	63	10 a.m. (22nd).	E. by N.	60	
Aberdeen.	9 a.m. (19th).	E. by S.	5 p.m. (19th).	E. by N.	55	93	2 p.m. (23rd).	S.E.	101	2 p.m. (22nd).	S.E. by E.	70	Wind rose to a little more than 30 miles on several occasions on the 18th.
	6 p.m. (23rd).	S.E. by E.	9 p.m. (23rd).	S.E. by E.	46	1	10 p.m. (23rd).	S.E. by S.	4	9 p.m. (23rd).	S.E. by E.	46	
	—	—	1 a.m. (24th).	S.E.	42	2	7 p.m. (24th).	E.S.E.	18	2 a.m. (24th).	S.E.	43	
Glasgow.	10 a.m. (20th).	N.E. by E.	2 p.m. (20th).	N.E. by E.	43	1	9 a.m. (21st).	N.E.	23	2 p.m. (20th).	N.E. by E.	43	
			4 p.m. (20th).	N.E. by E.	41	2							
	11 a.m. (21st).	N.E.	—	—	—	—	3 p.m. (21st).	N.E. by N.	4	11 a.m. & Noon (21st).	N.E.	36	
Alnwick Castle.	4 a.m. (20th).	E.S.E.	11 a.m. (20th).	E.	46	16	8 a.m. (21st).	E. by N.	28	5 and 8 p.m. (20th).	E.	50	
	9 a.m. (21st).	E. by N.	11 a.m. (21st).	E. by N.	42	2	8 p.m. (21st).	N.E. by N.	11	2 p.m. (21st).	N.E. by E.	47	
			2 p.m. (21st).	N.E. by E.	43	3							
Seaham -	Clock stopped between Noon 20th and 1 p.m. 21st Wind was freshening on the morning of the 20th and had reached the velocity of 39 miles per hour, when the clock stopped.												
Holyhead.	7 p.m. (19th).	E.	Midt. (19th).	E. by N.	43	4	9 a.m. (20th).	E. by N.	14	Midt. (19th). 1 a.m. (20th).	E. by N. E.	44	
	2 p.m. (21st).	N.E. by N.	4 p.m. (21st).	N.E. by N.	42	6	4 a.m. (22nd).	N.W.	14	5 p.m. (21st).	N.N.E.	45	

(*Table continued on next page.*)

No. 15 (*continued*). (Cyclonic System No. LX.)

Stations.	Velocity 30-40 Miles per Hour.		Velocity Exceeding 40 Miles per Hour.				Velocity Fell below 30 Miles per Hour.		Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity.			Remarks.
	Commenced.	Direction of Wind.	Commenced.	Direction of Wind.	Mean Vel.	Duration in Hours.	Ended.	Direction of Wind.		Hour.	Direction of Wind.	Velocity.	
Dec. 19-24 1876.													
Valencia	5 a.m. (20th).	N.E. by N.	—	—	—	—	8 a.m. (20th).	N.E.	3	7 a.m. (20th).	N.E.	34	—
Falmouth	Noon (19th).	S.E.	—	—	—	—	2 p.m. (19th).	S. by W.	2	1 p.m. (19th).	S.E.	35	—
Yarmouth	Midnt. (19th).	S.E. by E.	1 a.m. (20th).	S.E. by E.	43	3	5 a.m. (20th).	S.E. by S.	5	2 a.m. 3 a.m. (20th).	E.S.E. S.E. by E.	45	—
	11 p.m. (20th).	S.S.E.	—	—	—	—	2 a.m. (21st).	S.	3	11 p.m. (20th)	S.S.E.	36	—

No. 16. (Cyclonic System No. LXI.)

Stations.	Velocity 30-40 Miles per Hour.		Velocity Exceeding 40 Miles per Hour.				Velocity Fell below 30 Miles per Hour.		Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity.			Remarks.
	Commenced.	Direction of Wind.	Commenced.	Direction of Wind.	Mean Vel.	Duration in Hours.	Ended.	Direction of Wind.		Hour.	Direction of Wind.	Velocity.	
Dec. 25-29 1876.													
Sandwick	Noon (26th).	S. by E.	4 p.m. (26th).	S.E. by S.	47	17	10 a.m. (27th).	E.S.E.	22	4 a.m. (27th).	S.E.	51	—
Aberdeen	1 p.m. (26th).	S.E. by S.	11 p.m. (26th). 1 a.m. (27th). 4 a.m. (27th).	S.E. by S. S.E. by S. S.S.E.	40 41 41	1 2 1	9 a.m. (27th).	S.	20	1 and 4 a.m. (27th).	S.E. by S. & S.S.E.	41	Wind slightly exceeded 30 miles per hour, at 4, 5 and 6 a.m. on the 28th.
Alnwick Castle.	11 p.m. (26th).	S.	2 a.m. (27th). 5 a.m. (27th).	S. by E. S. by E.	40 44	1 1	6 a.m. (27th).	S. by E.	7	5 a.m. (27th).	S. by E.	44	—
	11 p.m. (27th).	W.	Midt. (27th).	W. by S.	47	9	9 a.m. (28th).	W.	10	3 a.m. (28th).	W.S.W.	57	—
	3 p.m. (28th).	S.W.	—	—	—	—	6 p.m. (28th).	W.S.W.	3	3 p.m. (28th).	S.W.	36	—
	8 p.m. (28th).	S.W. by W.	10 p.m. (28th).	S.W.	44	4	6 a.m. (29th).	W.	10	11 p.m. Midt. (28th). 1 a.m. (29th).	S.W. S.W. by W. W. by S.	45	—
Holyhead.	7 p.m. (26th).	S.E. by S.	8 p.m. (26th).	S.S.E.	51	10	7 a.m. (27th).	S.S.W.	12	10 p.m. (26th).	S.S.E.	59	—
	2 p.m. (27th).	S. by W.	—	—	—	—	9 p.m. (27th).	S.W. by S.	7	8 p.m. (27th).	S.W.	34	Wind also exceeded 30 miles at 9 and 10 a.m. on the 28th.
Armagh	5 p.m. (26th).	S.E. by E.	6 p.m. (26th).	S.E. by E.	43	2	2 a.m. (27th).	S. by E.	9	7 p.m. (26th).	S.E.	46	—

No. 17. (Cyclonic System, No. LXII.)

Stations.	Velocity 30–40 Miles per Hour.		Velocity Exceeding 40 Miles per Hour.				Velocity Fell below 30 Miles per Hour.		Total No. of Hours the Vel. above 30 Mls.	Maximum Velocity.			Remarks.
	Commenced.	Direction of Wind.	Commenced.	Direction of Wind.	Mean Vel.	Duration in Hours.	Ended.	Direction of Wind.		Hour.	Direction of Wind.	Velocity.	
Dec. 30/76—Jan. 1/77.													
Sandwick	2 a.m. (31st).	E.	8 a.m. (31st).	E. by N.	46	12	2 a.m. (1st).	N.N.E.	24	4 p.m. (31st).	N.E. by E.	54	
Aberdeen	11 p.m. (31st).	N.N.E.	—	—	—	—	2 a.m. (1st).	N.E. by N.	3	Midt. (31st).	N.E. by N.	37	
Alnwick Castle.	Noon (31st).	S.W. by S.	—	—	—	—	7 p.m. (31st).	S.W.	7	Noon & 1 p.m. (31st).	S.W. by S.	35	
Seaham	1 p.m. (31st).	S.S.W.	—	—	—	—	4 p.m. (31st).	S.S.W.	3	2 p.m. (31st).	S.S.W.	35	
Stonyhurst.	3 a.m. (31st).	S.	—	—	—	—	5 a.m. (31st).	S.W. by S.	2	4 a.m. (31st).	S. by W.	34	Wind also slightly exceeded 30 miles at a few other hours on 31st.
Holyhead	—	—	10 a.m. (30th).	S.S.E.	44	2	3 p.m. (30th).	S.S.W.	5	11 a.m. (30th).	S. by E.	44	
	9 p.m. (30th).	S. by E.	1 a.m. (31st). 8 a.m. (31st).	S.E. by S. S.S.W.	43 46	4 9	Midt. (31st).	S. by W.	27	1 p.m. (31st).	S.W. by S.	49	
	—	—	2 p.m. (1st).	N.N.E.	42	4	8 p.m. (1st).	E.N.E.	6	5 p.m. (1st).	N.N.E.	45	
Valencia	3 a.m. (30th).	E.S.E.	5 a.m. (30th). Noon (30th). 8 p.m. (30th). 11 p.m. (30th).	E. by S. S. S. by E. S. by E.	45 43 40 44	1 7 1 19	7 p.m. (31st).	W.S.W.	40	3 p.m. (31st).	S.S.W.	57	
Falmouth	4 a.m. (30th).	S. by E.	7 a.m. (30th).	S. by W.	40	1	10 a.m. (30th).	S.S.W.	6	7 a.m. (30th).	S. by W.	40	
	11 a.m. (30th).	S. by W.	—	—	—	—	5 p.m. (30th).	S.W. by S.	6	3 p.m. (30th).	S.W. by S.	39	
	7 p.m. (30th).	S.S.W.	11 p.m. (30th). 1 p.m. (31st).	S. by E. S.W. by S.	45 40	3 1	6 p.m. (31st).	S.S.W.	23	1 a.m. (31st).	S. by E.	46	
Kew	5 a.m. (31st).	S. by W.	—	—	—	—	3 p.m. (31st).	S.W.	10	5 a.m. (31st). 7 a.m. (31st). 8 a.m. (31st). Noon (31st).	S. by W. S.S.W. S.W. by S. S.W.	35	

TABLE OF ANTICYCLONIC SYSTEMS—OCTOBER, 1876.

NATURE OF CHARACTERISTICS OBSERVED.	No. XXVI. October 1-3.	No. XXVII. October 16-28.
Form	Elongated	Oval
Size	Large	Large
Height	Moderate; max. reading 30·2 ins.	Moderate; max. readings 30·5 ins.
Where first Observed	To the N.W. of the British Isles	Finland and Gulf of Bothnia
Direction of Motion	South-easterly	Southerly and South-easterly
Rate of Motion	Slow	Very slow
Regions passed over	Great Britain, the Netherlands and Germany	Scandinavia and Western Europe
Termination	Disappeared over Central Europe	Dispersed over Eastern Europe
Accompanying Winds	South-easterly	Light Southerly and Easterly airs
" Weather	Fair but rather cloudy	Cold and dull, but dry
REMARKS	This was a ridge of high pressure which passed from our north-western coasts across the North Sea to Germany, moving between two areas of low pressure, one of which lay over Northern Scandinavia, and the other upon our south-western coasts.	Simultaneously with the arrival of a new area of high pressure upon our western coasts, a large depression moving in an easterly direction reached Northern Europe, and under the joint influence of these changes this system moved to the eastward and dispersed.

TABLE OF ANTICYCLONIC SYSTEMS—OCTOBER TO DECEMBER, 1876.

No. XXVIII. **October 28-November 5.**	No. XXVIIIA. **November 6-26.**	No. XXIX. **December 11-27.**
Circular	Nearly circular	Nearly circular.
Large	Large	Large.
Moderate; max. reading 30·4 ins.	Moderate; max. readings 30·8 ins.	Moderate; max. readings 30·4 ins.
On our western coasts	Scandinavia and Western Russia	Scandinavia and the Gulf of Bothnia.
Easterly at first, then westerly	Southerly, then easterly	Southerly.
Slow	Very slow	Very slow.
The United Kingdom, France and the Netherlands.	Scandinavia and North-western Russia	North-western Europe.
Travelled to the W. of the British Isles	Gradually dispersed over Eastern Europe	Disappeared over Southern Europe.
At first northerly, then westerly	Varying between N.E. and S.E.	Varying between N.E. and S.E.
Cold and overcast, with fog and mist. Hail showers occurred in the N. and E.	Generally fine, cold at first but warmer later on	Unsettled and dull, with showers of snow, hail, or cold rain, at times; intensely cold over Scandinavia.
After this system had existed over Great Britain and France for some days, a depression passed across Norway to Germany, and caused the area of highest readings to recede to the W. and N.W.; it then became merged in a new anticyclone which arrived from the N., and spread itself over Scandinavia and Western Russia.	This anticyclone maintained itself very persistently over North-western Europe for three weeks, and at one period very high readings were registered over Scandinavia. Under the influence of several depressions which reached our western coasts, the area of highest readings shifted irregularly from time to time, but it never moved very far from the neighbourhood of the Baltic, until, at the close of the period, the arrival of a quick succession of disturbances from the W. caused it to travel towards Eastern Europe, where it finally disappeared.	The centre of this system began to travel southwards on the 24th, and it finally disappeared over Turkey about the 29th. The movement of the centre during the time it remained over North-western Europe was somewhat irregular, and was affected by the numerous depressions which arrived on the Western British coasts.

SECTION III.

REMARKS FOR OCTOBER 1876.

(*Tables A. to C.*, OCTOBER, *with Monthly Wind and Weather Charts.*)

Wind.—At the beginning of the month the wind was generally Northerly and North-easterly in direction, and light to fresh in force, but on the 2nd it veered to the South-east, and continued to blow from between South-east and South-west until the 8th. On the 9th, a further shift to the Westward occurred over England and Ireland, while an Easterly wind set in over Scotland, but this change was only temporary, and by the morning of the 10th, the general direction had again become Southerly and South-westerly, from which quarter it continued to blow, at times with considerable force, until the 18th. A Northerly breeze then set in over the western portion of the Kingdom, while a change to the Eastward took place on the Eastern coasts, and, the Northerly wind veering, by the 20th the general direction had become Easterly all over our islands. During the next three days but little change took place, but on the 24th, the wind in the West veered once more to the S.E. and S., while calms became general on the Eastern coasts; light variable winds, chiefly Southerly, continued for a few days, but on the 28th gradients for North-westerly winds began to be established in the North, and gradually spread Southward and became steeper, so that on the 30th North-westerly winds blew generally over the kingdom and continued till the close of the month.

Pressure.—The distribution of mean pressure was somewhat peculiar, the readings varying from a little under 29·95 inches over S.E. England, to a little above 29·75 inches over Western Ireland, the isobars lying nearly N. and S. The maximum readings occurred at most places on the 31st, at which time the centre of an anticyclone lay over the W. of Ireland; but to this rule the Eastern stations were exceptions, and at Aberdeen the highest point was attained on the 21st and 22nd, and at Kew on the 25th, an area of high pressure, which had existed for some time over Scandinavia, having at that time extended somewhat to the westward across the North Sea. The minimum readings occurred all over the kingdom on the 11th, in connexion with depression No. L. The range of pressure was considerable over Ireland and Scotland, amounting to 1·785 inches at Armagh, and to about 1·7 inches at the other observatories; over England, however, it was less, and at Kew it amounted to only 1·14 inches.

Movements of Depressions.—The number of depressions which reached us during the month was small, and their centres almost invariably travelled in a Northerly or North-easterly direction, over the northern portions of the kingdom; but at the end of the month a deep depression, moving on a South-easterly path, arrived over Northern Europe, and as it progressed, increased somewhat the gradient for Northerly winds over the British Isles. An area of high pressure existed over Western Europe for a few days in the early part of the month; it, however, moved gradually to the south-east, and remained there till the 16th, when it again appeared over north-western Europe, and continued till the 28th. After that date another system showed itself to the west of our Islands, and on the 31st its centre lay over Ireland.

Temperature.—The mean temperature for the month, corrected for height above sea level, was rather above the average, and decreased from 57° at the Channel Islands to 48° at the Hebrides and Shetlands. The range of temperature amounted very generally to between 30° and 40°. The minimum readings occurred at nearly all stations on the 31st, with a cold Northerly wind, but at several stations on the western coasts they were registered on the 23rd, at which time an Easterly wind was blowing over the country. The date on which the maxima occurred was more variable, but at the majority of stations it was between the 4th and 7th, although at some places it fell as late as the 19th or 20th.

Vapour Tension.—The mean tension of vapour was greatest along the Channel coasts, and decreased northwards to Scotland, where the lowest values were recorded. Relative humidity, on the other hand, was least in the Southwest of Ireland and on the coasts of the Irish Sea, and highest over the Midlands and southern portion of England.

Rainfall.—The rainfall over England was somewhat below the average for the month, especially in the Midland and southeastern counties, but in Scotland and Ireland, it was upon the whole, rather above the usual amount. A heavy fall of 2·2 inches occurred at Caermarthen on the 8th, and amounts exceeding an inch fell at several other stations, but in nearly all cases the maximum falls happened during the first half of the month.

TABLE A., OCTOBER.—SHOWING the MEAN and EXTREME PRESSURES and TEMPERATURES recorded at each of the SEVEN SELF-RECORDING OBSERVATORIES of the METEOROLOGICAL OFFICE during the Month of OCTOBER, 1876, together with the MONTHLY VAPOUR TENSION, the RELATIVE HUMIDITY, and TOTAL RAINFALL.

NAMES OF OBSERVATORIES.	PRESSURE at 32° F. and the Mean Sea Level (In English Inches).							TEMPERATURE In the Shade (In Degrees Fahrenheit).							HYGROMETRIC VALUES.		RAINFALL (In English Inches).
	Mean for the Month.	Extremes.					Range.	Mean for the Month.	Extremes.					Range.	Tension of Vapour (In English Inches.)	Relative Humidity (Saturation = 100.)	
		Minimum.		Maximum.					Minimum.		Maximum.						
		Reading.	Date.	Reading.	Date.				Reading.	Date.	Reading.	Date.					
	ins.	ins.	D. H.	ins.	D. H.	ins.		°	°	D. H.	°	D. H.	°	in.	%	ins.	
Valencia - -	29·772	28·704	11th, 10 a.m.	30·430	31st, Midt.	1·726	54·0	38·3	31st, 11 p.m.	62·6	20th, 3 p.m.	24·3	·350	84	5·605		
Armagh - -	·835	·671	11th, 6 p.m.	·456	31st, Midt.	1·785	51·5	35·5	31st, 11 p.m.	64·0	6th, 3 p.m.	28·5	·332	87	3·820		
Glasgow - -	·838	·676	11th, 4 p.m.	·364	31st, 10 p.m. Midt.	1·688	50·5*	35·2	31st, Midt.	62·5	4th, 2 p.m.	27·3	·302	83	6·440		
Aberdeen - -	·868†	28·700‡	11th, 5 p.m.	·407	21st, 11 a.m. 22nd, 8 p.m. 10 p.m.	1·707	49·3	33·8§	30th, Midt.	60·0	7th, 2 p.m. 8th, 1 p.m.	26·2	·299	85	2·795		
Falmouth - -	·889	29·077	11th, 11 a.m.	·378	31st, Midt.	1·301	54·3	41·4	31st, Midt.	63·7	6th, 1 p.m.	22·3	·354	83	4·590		
Stonyhurst -	·902	28·903	11th, 3 p.m.	·353	31st, Midt.	1·450	51·1	32·2	31st, 5 a.m	64·9	4th, 1 p.m.	32·7	·310	82	2·957		
Kew - -	29·938	29·213	11th, 4 p.m.	30·353	25th, 10 a.m.	1·140	52·9	35·3	31st, 9 p.m.	69·1	17th, 2 p.m.	33·8	·341	85	1·308		

* Mean for one day is approximate.

‡ Lowest reading recorded, but trace lost for 13 hours.

† Means for two days are approximate.

§ Probable minimum, trace lost for 6 hours.

TABLE B., OCTOBER.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at
The values are not

(The Stations are grouped in Districts, and then arranged in order of

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit, and Mean Sea Level) from Observations made at 9 a.m. and 9 p.m.	AIR TEMPERATURE.									
			At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Means of			Absolute Extremes.			
						Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.
		ins.	°	°	°	°	°	°	°		°	
0. SCOTLAND, N. -	Sandwick Manse (Orkneys)-	29·811	49·0	48·1	48·6	45·8	52·3	49·1	34·6	30th	61·6	7th
1. SCOTLAND, E. -	Glenalmond - - -	29·878	47·5	46·6	47·1	42·5	52·8	47·7	33·5	25th	62·2	7th
2. ENGLAND, N.E. -	Seaham - - -	29·895	52·4	50·1	51·3	46·9	56·5	51·7	34·3	31st	66·7	5th
	Durham* - - -	29·894	51·7	48·5	50·1	44·7	56·6	50·7	31·3	31st	66·3	4th
	Hull - - - -	29·938	52·4	51·0	51·7	47·3	57·1	52·2	34·0	31st	66·5	7th
	Kelstern (Calcethorpe) -	29·943	51·2	49·3	50·3	46·3	56·5	51·4	32·8	31st	67·4	7th
3. ENGLAND, E. -	Hillington - - -	29·944	53·5	50·7	52·1	46·9	59·8	53·4	36·9	2nd	69·2	5th
	Audley End - - -	29·956	53·5	50·4	52·0	45·8	59·3	52·6	31·5	31st	70·0	6th
	Chigwell Row - - -	29·983	53·4	51·8	52·6	48·4	58·0	53·2	33·1	31st	70·0	6th
4. MIDLAND COUNTIES.	Buxton - - - -	29·944	50·0	47·2	48·6	42·3	54·0	48·2	29·6	31st	63·9	19th
	Cheadle - - -	29·931	49·6	48·6	49·1	44·7	54·9	49·8	30·2	31st	65·9	6th
	Leicester - - -	29·920	52·8	51·4	52·1	47·7	58·2	53·0	35·7	31st	68·9	7th
	Uppingham - - -	29·931	51·2	49·1	50·2	44·2	57·4	50·8	31·7	31st	68·8	7th
	Oscott - - - -	29·925	51·3	49·4	50·4	46·4	57·3	51·9	31·9	31st	68·9	19th
	Churchstoke - - -	29·929	51·1	50·3	50·7	46·5	56·7	51·6	34·0	31st	68·1	6th
	Hereford - - -	29·912	51·7	50·3	51·0	47·0	57·2	52·1	35·0	26th	67·4	6th
5. ENGLAND, S. -	Marlborough - -	29·943	51·8	49·7	50·8	46·7	58·9	52·8	32·0	31st	70·3	7th
	Strathfield Turgiss - -	29·949	52·8	50·0	51·4	45·9	59·5	52·7	32·0	31st	71·4	19th
	Ramsgate - - -	29·969	55·5	54·4	55·0	51·0	59·5	55·3	38·9	31st	69·8	7th
	Folkestone - - -	29·951	54·9	53·1	54·0	—	—	—	—	—	—	--
	Hastings - - -	29·955	54·4	53·2	53·8	50·2	58·9	54·6	33·7	31st	68·3	7th
6. SCOTLAND, W. -	——	—	—	—	—	—	—	—	—	—	—	—
7. ENGLAND, N.W. -	Hawes - - - -	29·931	49·4	47·1	48·3	43·5	54·0	48·8	28·3	26th & 31st	64·6	4th
	Llandudno - - -	29·878	54·0	52·5	53·2	49·5	58·8	54·2	41·4	23rd	66·3	15th
8. ENGLAND, S.W. -	Caermarthen - - -	29·890	53·8	52·1	53·0	49·2	59·7	54·5	39·3	26th	69·5	5th
	Dartmoor - - -	29·982	49·0	48·0	48·5	44·8	53·7	49·3	33·0	31st	64·8	14th
9. IRELAND, N. -	Markree Castle - -	29·799	51·5	49·9	50·7	45·9	56·8	51·4	32·7	31st	65·1	3rd
10. IRELAND, S. -	Dublin - - - -	29·858	52·5	52·2	52·4	49·4	56·8	53·1	36·3	31st	64·6	6th
	Parsonstown - - -	29·829	51·4	49·6	50·5	46·0	57·3	51·7	31·0	23rd & 24th	66·1	3rd
CHANNEL - -	Jersey (St. Aubins) -	29·950	57·1	55·9	56·5	52·8	60·9	56·9	44·0	27th	72·7	6th

* At Durham the observations were taken at 10 a.m. and 10 p.m. each day.

STATIONS of the **SECOND ORDER** in the **BRITISH ISLANDS**, during the Month of **OCTOBER** 1876.
corrected for Diurnal Range.

Latitude, beginning in each case with the Station lying furthest North.)

TENSION OF VAPOUR.			RELATIVE HUMIDITY.			AMOUNT OF CLOUD (0 to 10).			RAINFALL.			WEATHER, No. of Days of							WIND, No. of Observations of								
At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
in.	in.	in.	%	%	%				ins.	ins.																	
·303	·298	·301	87	89	88	6·5	7·2	6·9	3·800	·850	13th	23	2	1	1	2	13	4	7	0	3	16	15	7	8	4	2
·302	·295	·299	91	91	91	8·6	7·5	8·1	7·060	1·530	3rd	21	0	0	0	0	15	0	1	4	17	6	6	12	5	0	11
·346	·324	·335	88	90	89	7·3	5·4	6·4	1·790	·480	3rd	10	0	0	1	3	11	0	2	4	8	7	16	8	2	6	9
·341	·311	·326	89	91	90	8·4	6·2	7·3	2·467	·611	8th	14	0	0	0	0	15	0	2	5	5	4	26	7	4	3	6
·377	·353	·365	96	94	95	7·7	5·7	6·7	2·590	·920	8th	15	0	0	0	3	14	0	2	6	5	11	3	23	1	4	7
·351	·329	·340	91	91	91	7·6	5·7	6·7	1·613	·387	8th	16	0	0	0	2	10	0	1	8	7	10	10	14	6	3	3
·365	·340	·352	89	92	90	6·9	7·6	7·3	0·728	·174	12th	13	0	0	0	2	13	0	3	5	8	11	6	11	5	8	5
·362	·336	·349	88	92	90	7·6	6·2	6·9	1·010	·380	12th	12	0	0	0	1	12	0	1	12	0	4	1	16	1	4	23
·345	·338	·342	85	87	86	8·0	7·0	7·5	1·220	·400	10th	8	0	0	1	1	13	0	2	12	15	4	12	5	3	3	6
·320	·292	·306	86	87	87	7·8	6·8	7·3	3·417	1·290	8th	16	0	0	0	0	11	0	2	4	7	10	2	17	8	6	6
·315	·302	·309	88	88	88	7·6	5·9	6·8	3·380	1·860	8th	16	0	1	0	4	15	0	2	10	8	7	8	7	1	3	16
·343	·336	·340	86	89	88	8·1	6·1	7·1	1·510	·410	3rd	15	0	0	0	2	16	1	2	5	11	12	4	18	4	1	5
·347	·323	·335	92	93	93	7·9	7·1	7·5	1·720	·562	6th	11	0	0	0	1	16	0	2	10	0	7	9	14	1	3	16
·348	·331	·340	90	92	91	7·9	6·4	7·2	1·500	·390	8th	15	0	0	0	2	16	1	3	11	11	6	14	9	3	2	3
·330	·323	·327	87	87	87	7·7	5·4	6·6	3·060	1·127	8th	11	0	0	0	0	6	2	2	10	11	19	10	4	1	1	4
·347	·329	·338	88	88	88	7·9	6·9	7·4	2·372	·555	8th	21	0	0	0	1	16	0	1	5	5	2	7	8	1	2	31
·351	·333	·342	91	93	92	8·2	6·9	7·5	1·674	·475	6th	14	0	0	1	2	17	0	1	15	4	1	4	13	1	2	21
·363	·337	·350	88	91	90	8·4	5·1	6·8	1·848	·366	6th	13	0	0	3	3	12	0	8	5	5	8	4	12	1	3	16
·386	·375	·381	85	86	86	7·9	5·3	6·6	1·030	·570	12th	6	0	1	2	3	9	6	11	6	10	2	9	8	6	1	9
·361	·357	·359	84	88	86	7·1	6·1	6·6	1·270	·530	10th	10	0	0	2	5	13	1	11	4	13	6	12	8	3	3	2
·373	·364	·369	86	87	86	7·3	6·5	6·9	1·765	·580	12th	13	0	0	1	4	15	3	9	18	5	7	9	11	1	1	1
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
·325	·310	·318	91	93	92	9·2	7·5	8·4	3·290	·610	9th	17	0	2	3	0	20	0	0	0	18	5	3	15	5	2	14
·331	·319	·325	79	81	80	8·3	7·3	7·8	3·072	·530	17th	15	0	0	0	1	20	1	1	2	12	6	15	12	13	1	0
·363	·358	·361	86	90	88	7·6	8·5	8·1	7·470	2·200	8th	18	0	0	0	0	18	1	3	3	16	3	7	10	2	1	17
·332	·326	·329	94	94	94	9·3	6·6	8·0	7·220	·920	8th	20	0	0	0	0	16	4	4	6	10	8	7	13	3	2	9
·337	·323	·330	87	89	88	6·9	7·4	7·2	3·701	·894	10th	19	0	2	2	3	15	0	4	6	3	17	20	6	1	1	4
·336	·338	·337	84	86	85	7·2	7·3	7·3	4·505	·954	10th	20	0	1	1	0	13	1	3	4	8	6	16	10	6	4	5
·337	·331	·334	88	92	90	7·7	7·1	7·4	3·202	·817	15th	21	0	0	1	3	18	0	3	4	6	21	7	8	3	4	0
·386	·385	·386	81	84	83	8·1	6·4	7·3	1·828	·512	17th	18	0	0	2	1	16	0	1	7	10	14	8	7	0	1	14

TABLE C., OCTOBER.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC REPORTING STATIONS in the BRITISH ISLANDS during the month of OCTOBER, 1876. Observations are made at 8 a.m. daily.

(The Stations are grouped in Districts, and then arranged in order of Latitude, beginning in each case with the Station lying furthest North.)

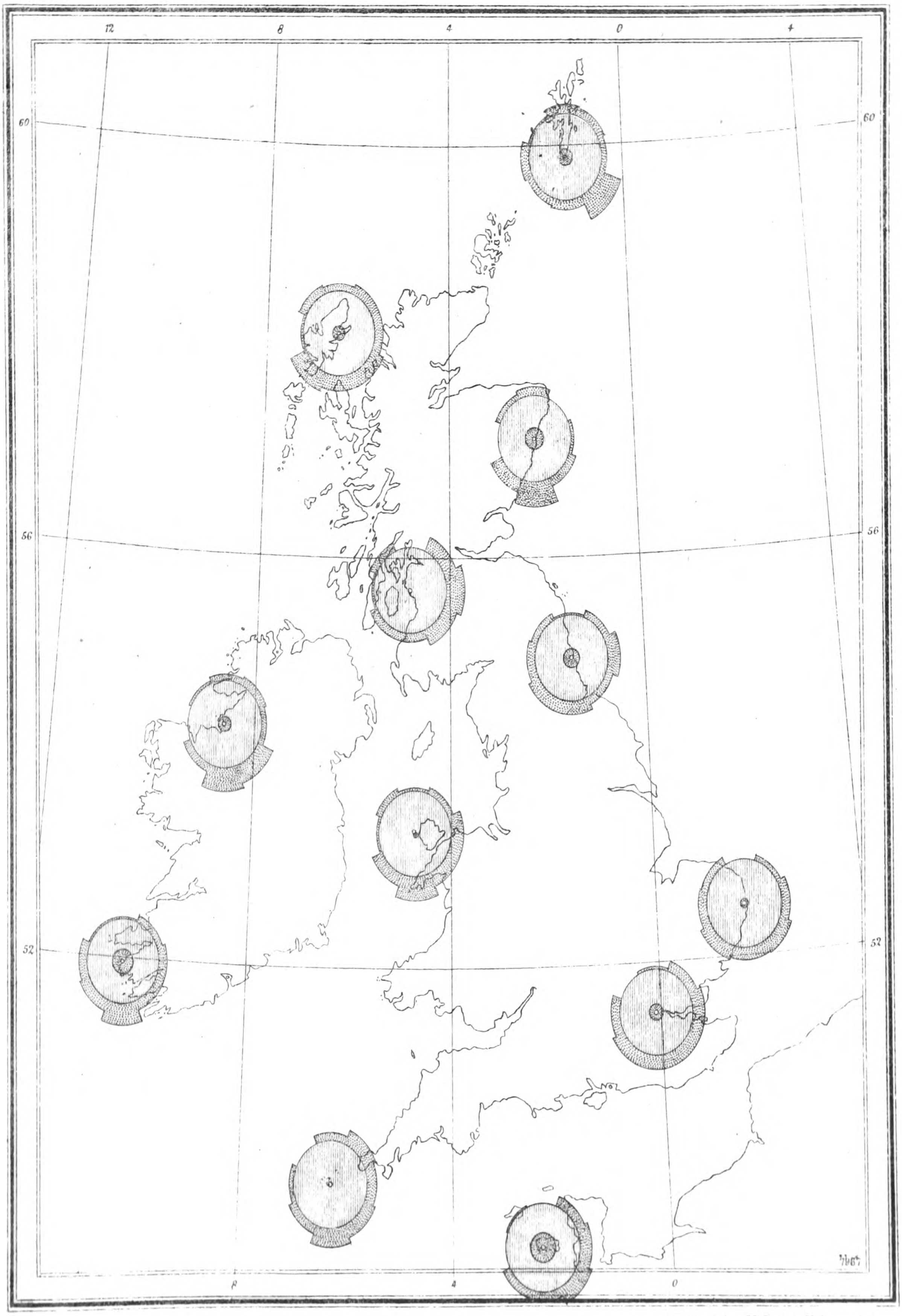
NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	AIR TEMPERATURE.								TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.			WEATHER, No. of Days of							WIND, No. of Observations of								
				Means of			Absolute Extremes.																									
			At 8 a.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.				Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
		ins.	°	°	°	°	°		°		in.	%		ins.	ins.																	
0. SCOTLAND, N.	Sumburgh Head	29·819	48·2	44·5	51·6	48·1	30	30th	56	7th	·293	88	7·6	3·62	0·75	19th	21	0	0	0	0	9	7	4	3	2	11	3	2	3	1	2
	Stornoway	29·782	48·0	43·4	52·2	47·8	33	21st	60	7th	·302	91	7·0	5·38	1·00	11th	25	1	1	0	5	14	4	2	3	3	5	5	7	1	3	2
	Thurso	29·813	47·9	43·8	54·5	49·2	34	30th	66	7th	·296	90	8·0	3·52	0·80	13th	23	0	0	0	0	17	1	2	1	1	6	15	0	3	1	2
	Wick	29·834	48·8	44·7	53·4	49·1	32	2nd, 30th	62	7th, 8th	·303	88	7·6	3·66	0·96	11th	16	1	0	0	5	20	3	3	1	1	8	8	4	2	2	2
1. SCOTLAND, E.	Nairn	29·830	47·5	44·0	53·5	48·8	32	22nd	64	6th	·286	88	6·8	2·64	0·50	11th	11	0	0	0	8	18	1	0	1	1	3	2	6	2	2	14
	Aberdeen	29·848	48·7	44·9	53·6	49·3	35	31st	60	7th, 8th	·298	87	6·3	2·79	0·60	13th	23	1	0	0	6	11	3	3	0	1	3	12	5	0	2	5
	Leith	*29·860	50·5	46·6	57·8	52·2	38	31st	68	4th	·333	90	7·3	2·57	0·60	3rd	14	0	0	0	3	13	0	1	1	3	9	4	8	2	1	2
2. ENGLAND, N.E.	Shields	29·899	51·1	47·6	55·8	51·7	35	31st	67	5th	·310	82	7·5	1·59	0·42	8th	16	0	0	0	4	18	3	1	2	5	3	6	6	3	2	3
	Scarborough	29·916	52·2	48·8	55·5	52·2	39	31st	65	7th	·342	88	7·5	2·39	0·93	8th	16	0	0	0	3	13	1	1	2	3	3	7	8	4	2	1
	York	29·918	50·2	45·4	57·9	51·7	32	31st	67	5th, 7th	·320	89	7·2	2·39	1·09	8th	14	0	0	0	5	16	3	3	2	5	2	13	2	3	1	0
3. ENGLAND, E.	Yarmouth	29·937	53·5	50·1	57·5	53·8	39	31st	68	4th	·354	87	5·5	1·31	0·34	10th	12	0	0	0	6	5	1	0	2	4	6	5	6	4	3	1
	Cambridge	29·937	50·6	46·1	59·7	52·9	33	31st	71	5th	·338	92	7·1	1·11	0·38	12th	14	0	0	0	7	18	0	3	5	3	3	9	4	3	1	0
4. MIDLAND COUNTIES.	Nottingham	29·930	51·1	46·8	59·1	53·0	33	31st	70	5th, 7th	·342	91	7·3	1·74	0·53	8th	14	0	0	0	4	14	0	3	4	1	7	8	2	0	1	5
	Oxford	29·914	51·5	48·2	58·3	53·3	35	31st	69	7th	·346	90	8·1	1·14	0·29	6th	12	0	0	0	3	19	0	2	4	2	2	8	3	1	0	9
5. ENGLAND, S.	London	29·929	52·2	48·2	59·1	53·7	36	25th, 26th, 27th, and 31st	70	6th	·350	90	6·9	1·08	0·31	10th	13	0	0	0	6	16	0	1	4	5	5	5	5	4	0	2
	Dover	29·933	54·6	52·4	58·3	55·4	37	31st	67	6th, 7th	·359	85	4·6	1·37	0·65	10th	10	0	0	0	10	3	0	3	2	6	4	1	8	3	4	0
	Hurst Castle	†29·903	55·2	51·4	58·3	54·9	38	25th	66	8th	·410	94	7·8	2·35	0·47	9th	18	0	0	0	4	19	2	3	8	1	6	3	7	2	0	1
6. SCOTLAND, W.	Ardrossan	‡29·851	51·5	49·2	55·2	52·2	38	31st	62	7th	·319	84	8·1	6·79	1·23	18th	18	0	0	0	2	18	2	0	5	9	6	3	4	1	3	0
7. ENGLAND, N.W.	Liverpool	29·879	50·9	48·2	56·6	52·4	38	31st	68	6th	·324	87	7·0	2·54	0·94	8th	15	0	0	0	5	12	0	0	4	4	14	5	2	1	1	0
	Holyhead	29·842	52·5	50·1	56·6	53·4	43	23rd	64	5th	·346	88	7·2	4·65	0·86	17th	18	0	0	0	3	12	3	1	2	5	5	10	5	1	2	0
8. ENGLAND, S.W.	Pembroke	29·841	53·6	51·6	56·6	54·1	44	22nd, 23rd	62	5th	·353	86	7·1	6·15	1·54	8th	18	0	0	0	2	12	7	1	4	4	6	5	3	3	3	2
	Portishead	29·891	52·7	47·9	59·2	53·6	40	26th, 28th, 29th, and 31st	72	5th	·365	92	7·7	3·06	0·56	17th	18	0	0	0	2	14	2	3	7	5	0	7	6	1	0	2
	Plymouth	29·879	53·3	50·6	58·7	54·7	39	30th	67	5th	·382	94	8·9	3·78	0·83	18th	17	0	0	0	2	26	2	3	6	8	2	3	6	1	0	2
9. IRELAND, N.	Greencastle	29·783	50·8	46·0	56·7	51·4	38	31st	64	6th	·330	88	9·1	5·58	1·03	2nd	23	0	0	0	1	25	0	3	4	3	5	7	2	5	2	0
	Donaghadee	29·824	51·2	48·6	54·7	51·7	41	31st	62	4th, 7th	·363	97	7·5	6·72	1·61	18th	19	0	0	0	5	18	4	2	2	5	6	8	6	1	1	0
10. IRELAND, S.	Kingstown	29·836	52·6	50·8	56·5	53·7	40	31st	62	4th, 6th	·337	85	6·9	4·77	0·60	10th	15	0	0	0	4	11	2	0	1	3	8	8	1	8	2	0
	Roche's Point	29·812	53·4	49·6	57·3	53·5	42	23rd	63	3rd	·350	86	7·3	6·17	1·12	10th	17	0	0	0	0	12	4	3	5	2	3	8	6	3	1	0
	Valencia	29·767	53·4	49·4	58·2	53·8	39	23rd	65	20th	·342	84	6·9	5·61	0·79	2nd	22	0	0	0	3	11	11	1	2	3	3	9	4	3	1	5
CHANNEL	Scilly (St. Mary's)	29·847	55·3	52·4	57·9	55·2	48	22nd, 23rd 24th, and 29th	64	7th	·386	88	8·1	3·80	1·31	16th	20	0	0	0	0	16	4	3	5	4	5	8	4	2	0	0

* This barometer mean is probably 0·01 ins. too low, the height of the barometer cistern being uncertain.

‡ This barometer reading is probably 0·02 in. too high.

† The barometer at this station was probably being read 0·02 ins. too low at this time.

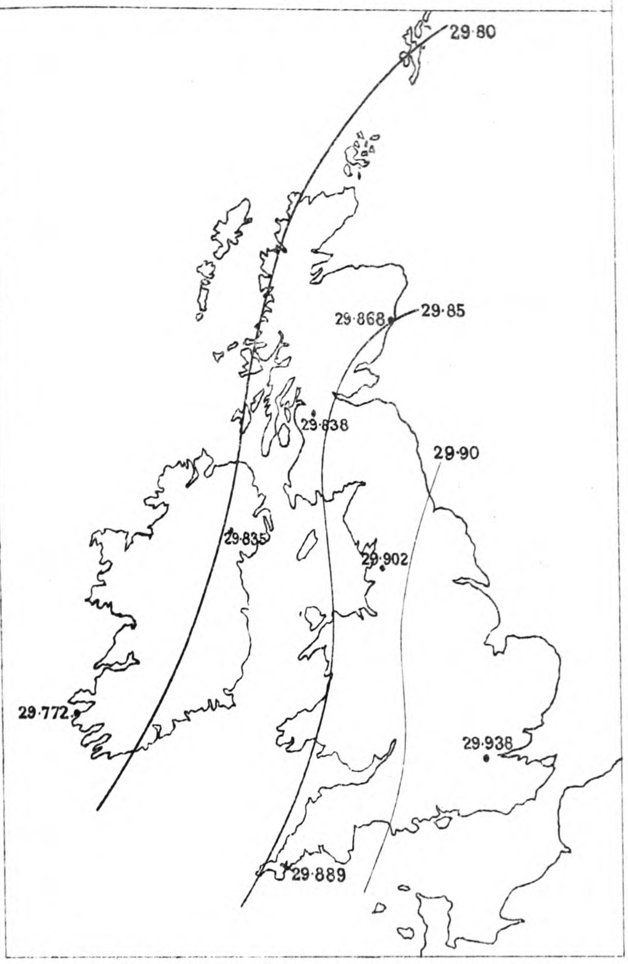
MONTHLY WIND CHART FOR OCTOBER 1876.


12
8
4
0
4
60
60
56
56
52
52
8
4
0

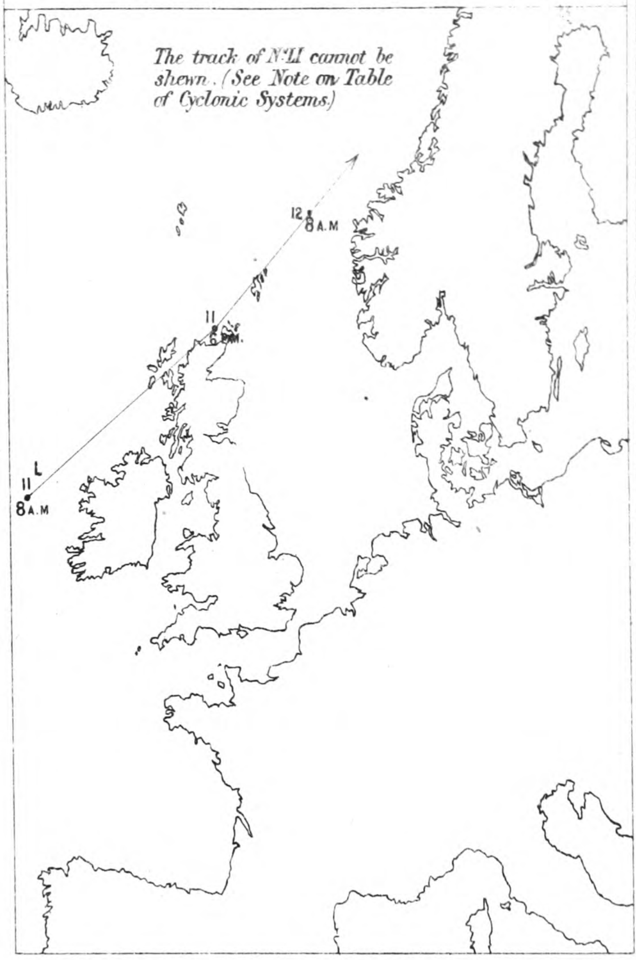
DANGERFIELD LITH 22 BEDFORD ST COVENT GARDEN.

MONTHLY WEATHER CHART OCTOBER 1876.

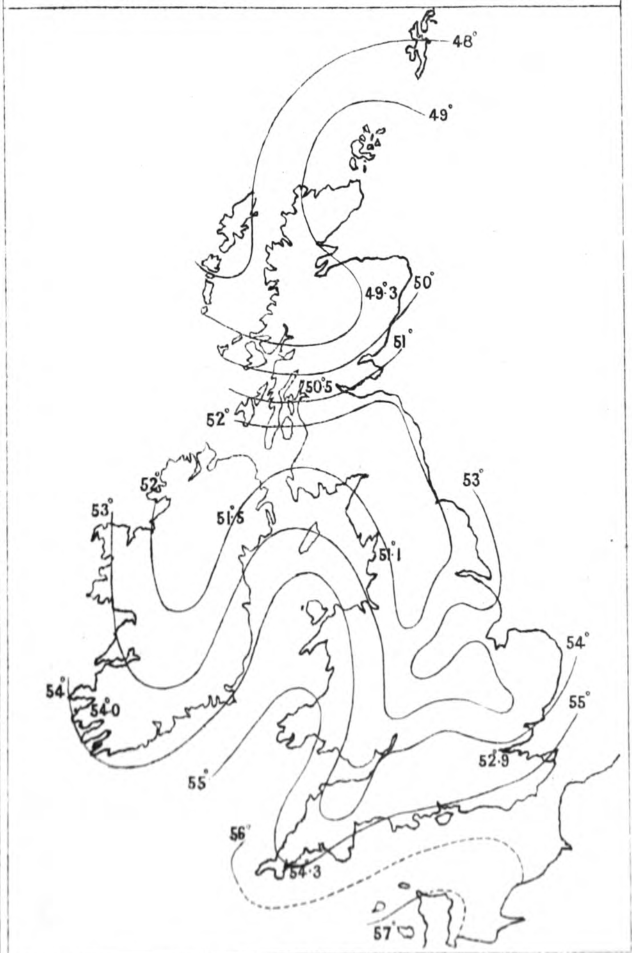
1. DISTRIBUTION OF MEAN PRESSURE


29·80
29·868
29·85
29·838
29·90
29·835
29·902
29·772
29·938
29·889

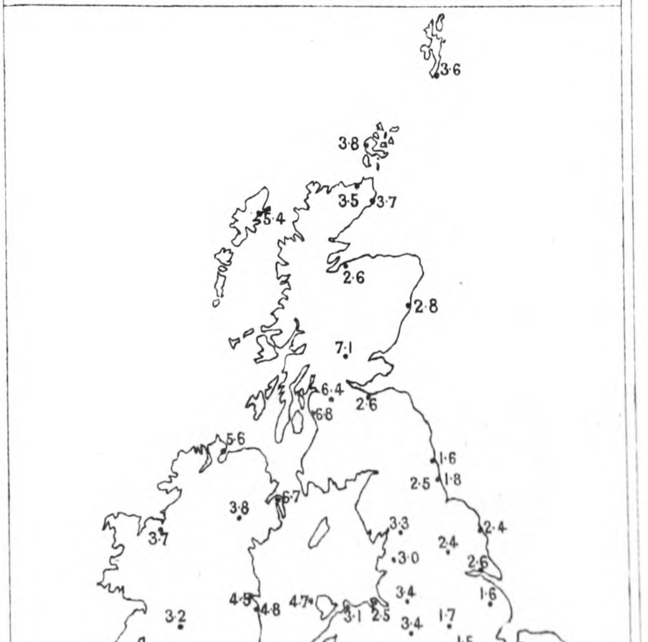
2. MOVEMENTS OF DEPRESSIONS.


The track of N°. II cannot be shewn. (See Note on Table of Cyclonic Systems)
12
8 A.M
11
6 P.M.
L
11
8 A.M

3. DISTRIBUTION OF MEAN TEMPERATURE.


48°
49°
49°3
50°
51°
50°5
52°
52°
53°
53°
51°5
51°1
54°
54°0
54°
55°
55°
52°9
56°
54°3
57°

4. RAINFALL


3·6
3·8
3·5
3·7
5·4
2·6
2·8
7·1
6·4
2·6
6·8
5·6
1·6
2·5
1·8
6·7
3·8
3·7
3·3
2·4
2·4
3·0
2·6
3·4
1·6
4·5
4·8
4·7
3·1
2·5
3·4
1·7
3·2
1·5
3·1
1·5
1·7
0·7
1·3
1·1
2·4
1·0
5·6
7·5
1·1
6·2
6·2
1·2
1·7
3·1
1·1
1·0
1·8
1·3
1·3
1·4
2·4
1·8
7·2
3·6
3·8
4·6
1·8

To follow Wind Chart for October.

DANGERFIELD LITH 22 BEDFORD S^T COVENT GARDEN
7267

REMARKS FOR NOVEMBER 1876.

(*Tables A. to C.*, NOVEMBER, *with Monthly Wind and Weather Charts.*)

Wind.—At the commencement of the month the wind circulated around an area of high pressure lying over Ireland, and was consequently Westerly in Scotland, Northerly over England, and North-easterly at the mouth of the Channel; a retrograde movement was, however, in progress, and by the 2nd the Westerly wind had extended Southwards over England, and a Southerly breeze had set in in the West. At the close of the 3rd the wind veered to E. over the N. of Scotland, and next day light variable airs and calms had become general all over the kingdom. On the evening of the 5th a Northerly wind, due to a depression on the Eastern shore of the North Sea, commenced to blow in Scotland, and quickly spread southwards, after which a gradual veering began, accompanying the development of an anticyclone over Scandinavia, and by the 8th the general direction had become easterly; on the 10th a further veering took place, due to the arrival of a series of depressions off our Western Coasts, and for several days Southerly and South-easterly winds—occasionally backing to E. in the North, and veering to W. on the Western Coasts—prevailed, and at times blew very strongly. On the 16th the depressions moved in a somewhat more easterly path, in consequence of which the winds veered still more, and on the 20th became generally North-westerly and Northerly. On the 21st variable airs prevailed, but conditions somewhat similar to those existing from the 10th to the 16th were becoming established, and for some days Southerly and South-easterly winds again blew, and in the West occasionally reached the force of a gale. On the 27th Northerly winds set in, in the rear of a depression which passed over central England, and during the next two days these gradually backed to W., and on the 30th shifted once more to S. and S.E. upon the approach of a depression towards our Western Coasts. It will be seen that upon the whole, although the direction of the wind was very variable during the month, South-easterly winds predominated generally, any development of Northerly winds being more noticeable at the northern than at the southern stations.

Pressure.—The distribution of mean pressure for the month was similar to that for October; the highest values, which nowhere reached 29·9 inches, were over the S.E. of England, and the lowest, 29·75 inches, in the W. of Ireland, the isobars consequently lying in a northerly and southerly direction over the kingdom. The range of pressure was greatest in the South-west and least in the North-east. The maxima occurred early in the month, and nowhere amounted to 30·5 inches; at most stations they were recorded on the 1st, but at Aberdeen and Kew not until the 4th. The date of the minima were more irregular. At Falmouth and Kew they occurred on the 12th, at the Irish stations and Glasgow during the night of the 14th, and at Stonyhurst and

Aberdeen during the latter part of the 27th, and the early part of the 28th respectively; it was only at Valencia that the barometer fell below 29 inches.

Movements of Depressions.—During the first ten days of the month pressure was rather high over Western Europe, and the only depression which came within our area during that time was one which travelled South-eastwards over Southern Norway to Denmark and Germany. Later on the arrival of cyclonic disturbances was more frequent, and in the majority of cases they moved to the North-eastward, their centres crossing over the northern portions of the kingdom; some of the earlier ones, however, followed a more Northerly track and skirted our western coasts, while later in the month two moved in an easterly direction, one passing up the Channel and the other across central England.

Temperature.—The range and distribution of mean temperature, corrected for height above sea level, were nearly normal, the isotherm of 51° lying over the mouth of the Channel, and that of 41° over the central portion of N. Scotland. The range of temperature amounted to 40° and upwards at Thurso, Glenalmond, and London, and to nearly 40° at several stations in the S.E. of England. The maxima occurred very generally on the 14th and 15th with a South-easterly wind; 64° was reached in the S.E. of England, but as a rule the highest temperature ranged between 55° and 60°. The 10th and 11th were the dates on which the minima were most generally reached, and in the N. of Scotland some low readings were obtained, 13° at Thurso, 16° at Wick, and 18° at Glenalmond; these were, however, exceptionally low, and at the majority of stations the readings ranged between 25° and 30°.

Vapour Tension.—Vapour tension was highest over the south-western coasts, and lowest over Scotland, but the values were very uniform over the whole of the central portion of Great Britain. Relative humidity was greatest over the southern and south-eastern counties of England, and, as a rule, least upon the north-western coasts, but the difference between the values was only slight.

Rainfall.—The rainfall was rather above the average over the S.W. of the British Isles, the fall at Valencia being exceptionally large; but over the remainder of the kingdom it differed, upon the whole, very little from the mean. On the 14th, 2·36 inches fell at Glenalmond, 1·77 inches at Aberdeen, and 1·5 inches at Ardrossan; and falls of upwards of an inch in 24 hours occurred at several other stations during the month, the maximum amounts being most commonly registered between the 10th and 14th.

TABLE A., NOVEMBER.—SHOWING the MEAN and EXTREME PRESSURES and TEMPERATURES recorded at each of the SEVEN SELF-RECORDING OBSERVATORIES of the METEOROLOGICAL OFFICE during the Month of NOVEMBER, 1876; together with the MONTHLY VAPOUR TENSION, the RELATIVE HUMIDITY, and TOTAL RAINFALL.

NAMES OF OBSERVATORIES.	PRESSURE at 32° F. and the Mean Sea Level (In English Inches).						TEMPERATURE In the Shade (In Degrees Fahrenheit).						HYGROMETRIC VALUES.		RAINFALL (In English Inches).
	Mean for the Month.	Extremes.				Range.	Mean for the Month.	Extremes.				Range.	Tension of Vapour (In English Inches).	Relative Humidity (Saturation = 100).	
		Minimum.		Maximum.				Minimum.		Maximum.					
		Reading.	Date.	Reading.	Date.			Reading.	Date.	Reading.	Date.				
	ins.	ins.	D. H.	ins.	D. H.	ins.	°	°	D. H.	°	D. H.	°	in.	%	ins.
Valencia - -	29·733*	28·871	14th, 7 p.m.	30·427†	1st, 2 a.m.	1·556	49·7*	35·3	9th, 10 p.m.	59·3	14th, 2 p.m.	24·0	·306	86	9·307
Armagh - -	·818	29·121	14th, Midt.	·462	1st, 9 a.m.	1·341	43·9	27·0	30th, 5 a.m.	55·7	15th, 2 p.m.	28·7	·256	89	2·674
Glasgow - -	·834	·252	15th, 3 a.m.	·373	1st, 10 a.m.	1·121	40·5	24·4	10th, 6 a.m.	55·5	5th, 1 p.m.	31·1	·217	86	3·565
Aberdeen - -	·879	·293	28th, 6 a.m. 7 a.m.	·369	4th, 11 a.m.	1·076	42·0	24·0	10th, 7 p.m.	55·4	3rd, 2 p.m.	31·4	·227	86	4·700
Falmouth - -	·845	·019	12th, 5 p.m.	·454	1st, Midt.	1·435	48·7*	32·0	10th, 0.10 a.m.	58·2	13th, 2 p.m.	26·2	·283	82	5·960
Stonyhurst - -	·856	·255	27th, 3 p.m.	·399	1st, 9 a.m.	1·144	42·1	27·0	10th, 7 a.m.	55·3	15th, 1 p.m. 16th, 6 p.m.	28·3	·234	88	3·097
Kew - -	29·884	29·120	12th, Midt.	30·387	4th, 10 p.m.	1·267	44·1	25·5	10th, 10 p.m.	62·9	14th, 1 p.m.	37·4	·251	86	2·718

* Mean for one day is approximate.

† Trace rather faint.

TABLE B., NOVEMBER.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at
The values are not
(The Stations are grouped in Districts, and then arranged in order of Latitude,

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 9 a.m. and 9 p.m.	AIR TEMPERATURE.									
						Means of			Absolute Extremes.			
			At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.
		ins.	°	°	°	°	°	°	°		°	
0. SCOTLAND, N.	Sandwick Manse (Orkneys)	29·855	41·8	41·2	41·5	38·6	45·5	42·1	22·9	11th	52·2	7th
1. SCOTLAND, E.	Glenalmond	29·881	38·2	38·2	38·2	33·5	44·7	39·1	17·8	10th	60·3	5th
2. ENGLAND, N.E.	Seaham	29·859	42·8	42·9	42·9	38·4	47·1	42·8	28·8	30th	55·0	15th
	Durham*	29·852	41·6	40·3	41·0	35·6	46·1	40·9	24·5	10th, 11th	55·9	15th
	Hull	29·884	42·3	41·9	42·1	38·1	46·4	42·3	28·0	10th, 11th	54·5	15th
	Kelstern (Calcethorpe)	29·881	40·7	40·5	40·6	36·4	45·9	41·2	20·3	10th	56·5	15th
3. ENGLAND, E.	Hillington	29·875	42·8	42·0	42·4	37·1	48·3	42·7	20·9	10th	58·3	16th
	Audley End	29·892	42·6	42·5	42·5	37·2	48·5	42·9	22·8	11th	60·3	16th
	Chigwell Row	29·916	43·0	43·0	43·0	38·9	48·2	43·6	27·9	11th	60·5	16th
4. MIDLAND COUNTIES.	Buxton	29·887	40·5	40·0	40·3	35·9	45·0	40·5	26·7	11th	55·7	15th
	Cheadle	29·870	40·4	40·7	40·5	36·5	45·5	41·0	26·0	11th	58·2	15th
	Leicester	29·875	42·6	42·9	42·8	38·6	47·9	43·3	28·0	11th	61·9	15th
	Uppingham	29·869	40·9	40·9	40·9	36·8	46·5	41·7	26·2	11th	58·8	15th
	Oscott	29·868	40·9	41·3	41·1	36·8	47·0	41·9	23·9	10th	57·2	15th
	Churchstoke	29·869	41·8	41·3	41·6	36·2	47·1	41·7	24·0	9th	59·1	15th
	Hereford	29·855	42·5	42·1	42·3	37·7	48·8	43·3	26·0	11th	58·9	15th
5. ENGLAND, S.	Marlborough	29·885	41·7	42·0	41·8	37·0	49·1	43·1	25·9	10th	60·8	14th
	Strathfield Turgiss	29·889	42·9	42·2	42·6	36·4	49·9	43·2	24·2	10th	62·7	14th
	Ramsgate	29·902	44·8	44·9	44·9	40·4	49·5	45·0	29·2	11th	59·7	14th
	Folkestone	29·888	45·1	44·0	44·6	—	50·1	—	—	—	63·9	14th
	Hastings	29·897	44·4	44·9	44·7	40·6	49·9	45·3	28·5	10th	60·2	15th
6. SCOTLAND, W.	——	—	—	—	—	—	—	—	—	—	—	—
7. ENGLAND, N.W.	Hawes	29·888	39·1	39·2	39·2	34·5	44·3	39·4	18·8	10th	53·7	15th
	Llandudno	29·832	44·8	44·8	44·8	40·6	49·4	45·0	28·0	10th	59·6	15th
8. ENGLAND, S.W.	Caermarthen	29·832	45·2	44·0	44·6	39·2	51·3	45·3	22·6	10th	60·8	15th
	Dartmoor	29·933	42·2	41·7	42·0	37·3	47·3	42·3	22·6	10th	59·0	4th
9. IRELAND, N.	Markree Castle	29·774	43·0	43·3	43·2	37·8	49·2	43·5	25·8	2nd	56·4	4th, 15th
10. IRELAND, S.	Dublin	29·818	45·0	45·4	45·2	41·6	49·0	45·3	31·0	9th	57·3	15th
	Parsonstown	29·790	43·4	43·5	43·5	38·8	50·3	44·6	23·8	10th	59·0	15th
CHANNEL	Jersey (St. Aubins)	29·912	50·3	48·9	49·6	45·1	53·8	49·5	34·3	10th	60·3	14th

* At Durham the observations were taken at 10 a.m. and 10 p.m. each day.

STATIONS of the SECOND ORDER in the BRITISH ISLANDS, during the Month of NOVEMBER, 1876, corrected for Diurnal Range.
beginning in each case with the Station lying furthest North.)

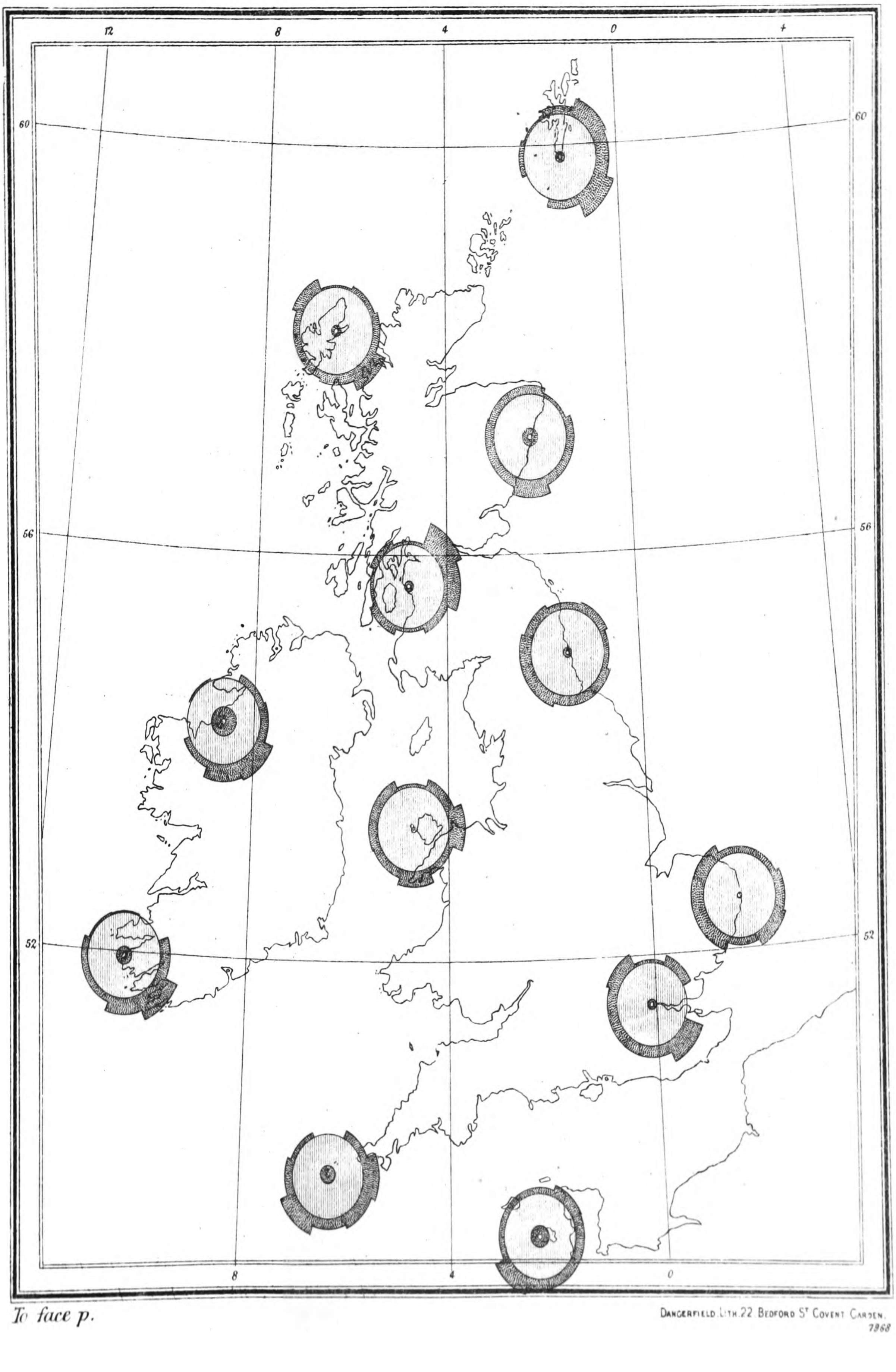
TENSION OF VAPOUR.			RELATIVE HUMIDITY.			AMOUNT OF CLOUD (0 to 10).			RAINFALL.			WEATHER. No. of Days of							WIND. No. of Observations of								
At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
in.	in.	in.	%	%	%				ins.	ins.																	
·245	·235	·240	92	92	92	6·2	5·6	5·9	4·700	·840	2nd	23	4	0	0	4	8	4	5	1	11	16	4	0	8	2	13
·219	·214	·217	91	89	90	6·9	6·6	6·8	4·800	2·360	14th	17	5	0	0	4	13	0	5	7	12	6	5	8	3	4	10
·252	·255	·254	92	92	92	6·7	6·1	6·4	2·883	·400	12th	21	3	4	0	3	10	1	3	7	5	6	12	7	10	7	3
·246	·239	·243	94	96	95	8·4	7·3	7·9	5·231	1·243	12th	18	4	3	0	1	18	0	3	4	7	4	15	9	4	9	5
·253	·248	·251	94	94	94	7·4	6·0	6·7	3·820	·760	12th	24	3	2	0	1	13	1	4	4	6	9	3	9	5	11	9
·248	·246	·247	95	94	95	8·4	6·3	7·4	3·980	·663	12th	25	4	2	0	0	15	0	8	0	6	8	9	12	5	8	4
·257	·254	·256	93	95	94	7·2	6·4	6·8	2·485	·460	12th	22	3	2	0	1	11	0	6	5	5	10	7	9	9	5	4
·255	·256	·256	93	94	94	7·6	6·5	7·1	2·540	·490	12th	19	1	2	0	1	15	0	9	0	3	10	1	10	4	15	8
·262	·263	·263	95	95	95	6·9	7·1	7·0	3·360	·580	11th	16	1	1	0	3	14	2	4	1	15	5	7	7	9	9	3
·229	·228	·229	88	89	89	8·8	7·8	8·3	5·785	1·130	19th	19	4	0	0	2	20	1	4	10	4	8	3	9	4	13	5
·232	·232	·232	92	91	91	8·3	7·2	7·7	4·020	·530	12th	20	2	2	0	1	20	0	6	12	7	8	2	7	4	7	7
·249	·253	·251	91	91	91	8·0	7·3	7·7	3·000	·540	3rd	18	3	0	0	2	18	0	10	4	8	9	8	10	2	6	3
·246	·247	·247	93	93	93	8·0	8·0	8·0	2·974	·771	12th	16	2	0	0	1	19	0	9	4	1	12	7	8	1	11	7
·247	·251	·249	94	93	94	7·7	7·6	7·7	3·840	·560	12th	17	2	0	0	2	17	0	9	9	6	9	6	8	5	7	1
·242	·241	·242	88	89	89	6·3	5·5	5·9	3·873	·696	12th	20	2	0	0	2	6	0	4	8	1	16	2	7	6	9	7
·248	·250	·249	89	90	89	6·1	6·0	6·1	4·105	·750	12th	19	1	0	0	7	11	0	4	4	4	5	5	1	4	4	29
·244	·247	·246	92	93	92	7·0	6·9	7·0	4·336	·798	27th	17	2	0	0	3	14	0	4	4	1	6	6	8	7	3	21
·256	·259	·258	90	92	91	6·8	7·3	7·1	4·050	1·402	26th	17	0	0	0	3	15	0	15	2	3	8	9	3	9	3	8
·277	·276	·277	91	90	91	7·3	6·2	6·8	4·060	·790	12th	18	3	3	0	1	14	6	15	2	2	2	12	8	13	4	2
·261	·261	·261	87	90	89	5·7	6·3	6·0	3·830	·480	11th	20	2	1	1	5	11	1	16	0	6	8	11	2	12	3	2
·270	·276	·273	89	90	89	5·4	6·4	5·9	3·790	·750	11th	20	1	0	0	8	13	1	13	4	3	6	13	6	11	4	0
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
·230	·232	·231	93	93	93	8·3	7·2	7·8	3·780	·630	14th	19	5	1	0	1	17	0	3	1	17	8	5	4	10	2	10
·252	·250	·251	85	84	85	7·9	5·8	6·8	5·500	·870	27th	23	2	2	0	4	16	0	3	2	11	7	13	6	17	1	0
·276	·275	·276	89	93	91	6·7	7·0	6·9	5·620	1·010	24th	18	0	0	0	4	13	0	3	0	15	7	2	5	3	2	23
·261	·258	·260	94	95	94	6·8	6·5	6·7	8·720	1·090	17th	23	1	2	0	2	12	1	5	3	3	6	9	8	11	5	10
·258	·259	·259	91	90	91	7·4	7·3	7·4	2·997	·477	16th	26	0	1	0	2	16	0	1	5	5	16	14	6	0	2	11
·268	·272	·270	88	89	89	7·5	7·1	7·3	3·614	·538	16th	20	2	2	0	0	13	0	2	1	6	13	7	4	14	8	5
·262	·270	·266	91	93	92	7·6	6·9	7·3	2·496	·424	16th	25	0	0	0	3	17	0	1	3	7	23	6	5	2	2	11
·303	·304	·304	81	86	83	6·9	6·7	6·8	3·940	·578	11th	21	0	2	0	0	12	1	3	9	7	6	5	12	4	3	11

TABLE C., NOVEMBER.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC REPORTING STATIONS in the BRITISH ISLANDS, during the month of NOVEMBER, 1876. Observations are made at 8 a.m. daily.

(The Stations are grouped in Districts, and then arranged in order of Latitude, beginning in each case with the Station lying furthest North.)

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	AIR TEMPERATURE.								TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.			WEATHER. No. of Days of							WIND. No. of Observations of								
				Means of			Absolute Extremes.																									
			At 8 a.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.				Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
		ins.	°	°	°	°	°		°		in.	%		ins.	ins.																	
0. SCOTLAND, N.	Sumburgh Head	29·881	42·3	38·2	45·2	41·7	30	10th	50	2nd	·228	85	7·0	2·83	0·52	1st	26	0	0	0	4	10	4	3	6	5	9	3	0	2	1	1
	Stornoway	29·808	41·8	37·7	46·2	42·0	28	10th	54	3rd	·231	88	6·4	3·00	1·09	28th	20	0	0	0	5	14	4	1	2	3	8	4	3	3	5	1
	Thurso	29·841	41·4	36·8	47·2	42·0	13	11th	53	17th	·231	89	7·8	3·89	0·47	2nd	24	0	0	0	0	14	1	4	1	2	6	8	2	2	1	4
	Wick	29·846	42·6	37·6	46·0	41·8	16	11th	51	15th	·240	88	6·8	3·61	0·81	14th	20	0	0	0	7	15	2	2	1	1	10	4	2	3	5	2
1. SCOTLAND, E.	Nairn	29·851	39·2	35·6	44·6	40·1	24	10th, 11th	56	17th	·216	90	6·9	2·05	0·55	14th	17	0	0	0	8	17	1	1	1	3	4	2	0	3	4	12
	Aberdeen	29·846	41·0	38·1	46·0	42·1	26	11th	57	3rd	·221	86	6·3	4·82	1·77	14th	18	1	0	0	5	10	4	3	1	3	3	7	4	4	3	2
	Leith	29·864	40·5	36·3	48·3	42·3	26	11th	58	5th	·233	93	7·6	3·37	0·80	14th	16	0	0	0	2	16	0	0	3	1	7	2	6	6	4	1
2. ENGLAND, N.E.	Shields	29·872	42·0	39·1	46·7	42·9	29	29th	55	15th	·229	86	7·6	2·80	0·40	25th	22	0	0	0	6	20	5	2	3	2	4	4	5	5	4	1
	Scarborough	29·872	43·1	40·0	46·8	43·4	29	12th	53	17th	·252	90	7·4	3·56	1·15	12th	22	1	1	0	4	14	3	4	2	5	3	3	8	4	1	0
	York	29·876	40·7	36·2	47·7	42·0	24	10th, 11th	58	15th	·237	93	7·2	3·42	0·75	12th	21	0	0	0	4	15	0	6	0	4	2	7	4	4	3	0
3. ENGLAND, E.	Yarmouth	29·870	43·0	39·5	47·0	43·3	26	11th	54	15th, 16th	·255	92	6·4	2·91	0·52	8th	24	0	0	0	5	8	3	2	2	4	5	2	5	5	5	0
	Cambridge	29·887	41·3	37·4	49·6	43·5	25	11th	62	15th	·243	94	8·2	2·62	0·56	12th	20	0	0	0	3	20	0	5	0	1	6	4	6	2	6	0
4. MIDLAND COUNTIES.	Nottingham	29·889	40·7	37·3	48·2	42·8	26	10th	59	15th	·239	94	7·2	2·73	0·69	12th	20	1	0	0	7	17	0	4	2	2	5	5	4	0	2	6
	Oxford	29·874	41·9	38·6	49·1	43·9	29	8th	61	14th	·246	93	7·2	3·29	0·68	12th	18	0	0	0	7	16	0	5	1	4	6	1	4	3	1	5
5. ENGLAND, S.	London	29·885	42·7	38·6	50·2	44·4	22	11th	64	14th	·257	93	7·3	2·63	0·41	12th	16	0	0	0	4	17	0	1	3	0	8	4	4	4	5	1
	Dover	29·880	44·9	41·5	49·4	45·5	31	10th, 11th	59	14th	·258	87	5·1	2·58	0·57	27th	19	0	0	0	4	3	0	4	0	3	4	4	5	4	4	2
	Hurst Castle	29·869	46·3	40·7	51·8	46·3	26	10th	60	14th	·300	96	4·8	3·79	0·56	11th	21	0	0	0	13	10	1	6	2	1	5	5	3	2	6	0
6. SCOTLAND, W.	Ardrossan	29·856	41·6	38·2	47·4	42·8	27	10th, 11th	57	5th	·227	86	7·2	3·15	1·50	14th	13	1	0	0	5	14	1	1	11	7	2	1	3	1	3	1
7. ENGLAND, N.W.	Liverpool	29·850	42·0	39·4	47·1	43·3	29	11th	57	15th	·241	91	8·4	4·24	0·84	28th	19	1	0	0	4	23	0	3	6	5	7	1	2	4	2	0
	Holyhead	29·820	45·4	42·6	49·7	46·2	33	10th	56	4th, 14th, 15th.	·271	90	7·1	4·39	1·27	26th	24	0	0	0	3	10	1	1	3	7	2	6	3	4	4	0
8. ENGLAND, S.W.	Pembroke	29·809	47·4	44·1	51·1	47·6	31	10th	56	4th, 14th	·284	87	6·8	4·23	0·56	24th	17	0	0	0	3	9	7	1	4	6	5	2	5	3	3	1
	Portishead	29·856	43·5	38·3	51·6	45·0	26	10th	62	15th	·263	93	6·9	4·11	0·70	12th	18	0	0	0	4	12	4	4	4	4	4	1	4	7	1	1
	Plymouth	29·845	45·1	40·6	53·3	47·0	27	10th	59	4th	·279	93	5·6	4·99	0·88	12th	16	0	0	0	9	13	2	1	6	4	4	1	6	1	4	3
9. IRELAND, N.	Greencastle	29·788	43·4	38·2	48·9	43·6	29	30th	55	5th	·251	89	7·2	3·68	0·77	16th	20	0	0	0	8	21	0	5	2	6	4	3	3	4	3	0
	Donaghadee	29·827	43·5	40·8	47·7	44·3	28	30th	55	5th, 15th	·260	92	5·2	3·62	0·87	14th	19	0	0	0	8	8	2	2	3	5	3	4	4	7	2	0
10. IRELAND, S.	Kingstown	29·817	46·8	43·8	49·9	46·9	36	2nd	56	15th	·274	86	7·7	4·54	0·85	14th	20	0	0	0	3	17	3	0	1	4	9	6	0	6	4	0
	Roche's Point	29·783	48·2	44·2	52·4	48·3	34	10th	56	5th, 6th	·290	87	6·8	5·88	0·92	13th	20	0	0	0	5	15	3	4	3	2	4	7	6	2	2	0
	Valencia	29·740	49·6	44·3	54·7	49·5	33	10th	61	14th	·307	87	7·8	8·86	1·26	10th	21	0	0	0	3	17	3	1	0	4	10	6	3	3	1	2
CHANNEL	Scilly (St. Mary's)	29·821	51·0	47·7	54·4	51·1	39	10th	59	3rd, 4th 13th.	·331	88	8·1	4·19	0·46	12th	19	0	0	0	1	17	3	0	2	6	4	3	7	4	2	2

MONTHLY WIND CHART FOR NOVEMBER 1876.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56
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52
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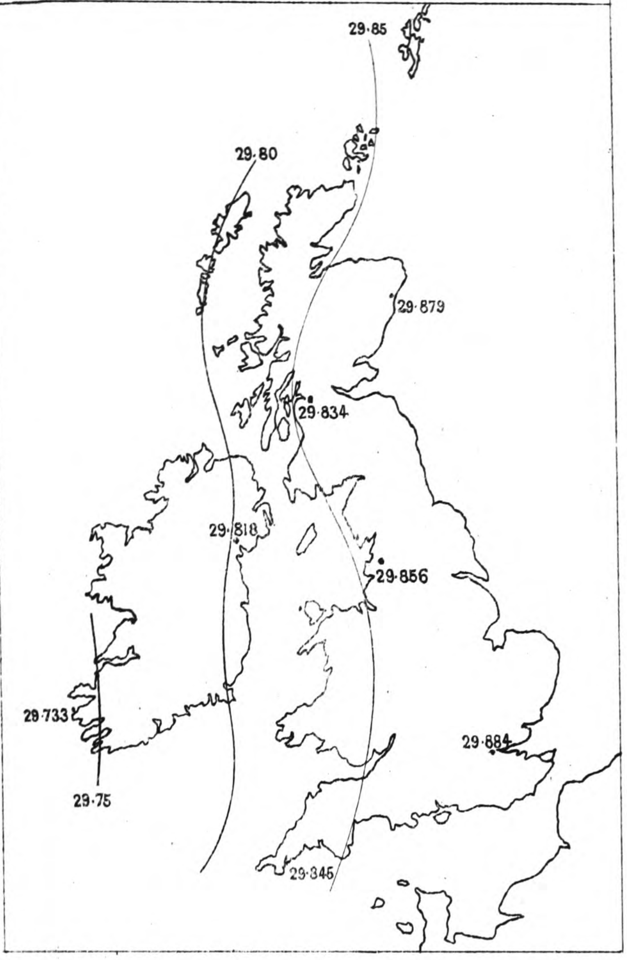
To face p.

DANGERFIELD LITH. 22 BEDFORD ST COVENT GARDEN.
7968

MONTHLY WEATHER CHART NOVEMBER 1876.

1. DISTRIBUTION OF MEAN PRESSURE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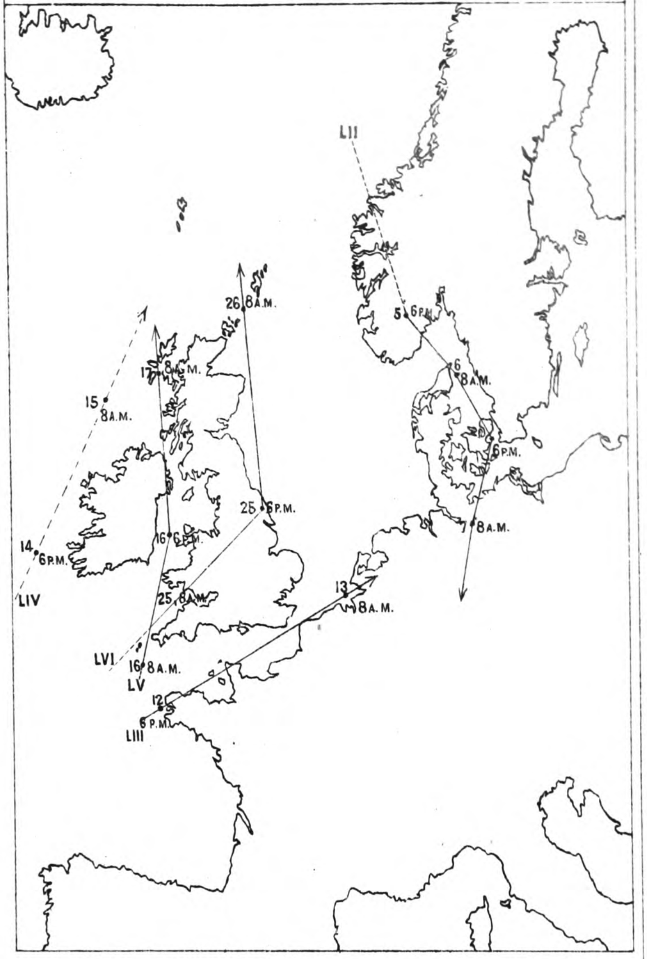
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6 8 A.M.
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7 8 A.M.
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17 8 A.M.
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16 6 P.M.
14 6 P.M.
LIV
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LVI
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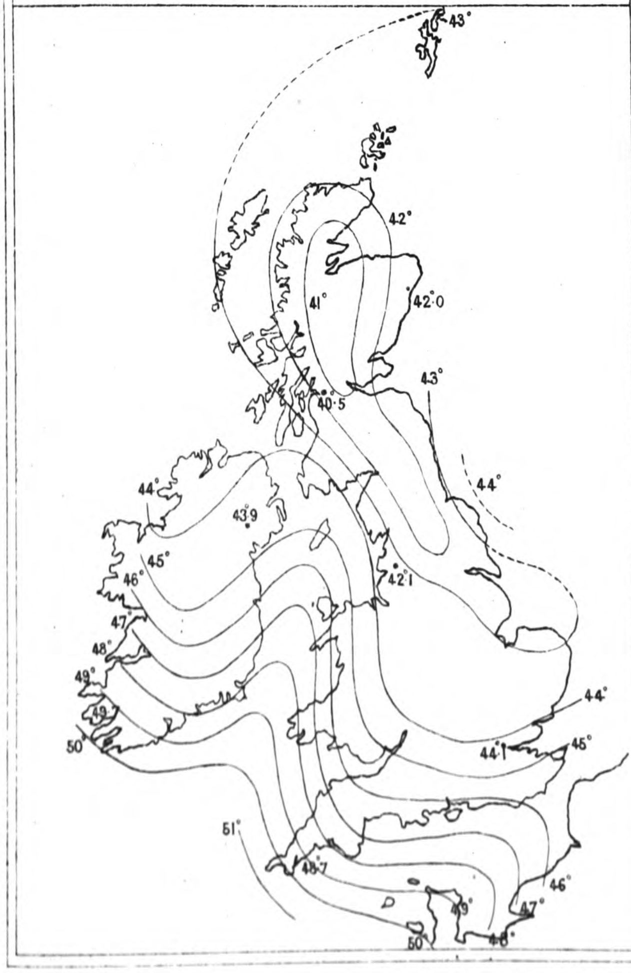
LV
12 6 P.M.
LIII

3. DISTRIBUTION OF MEAN TEMPERATURE.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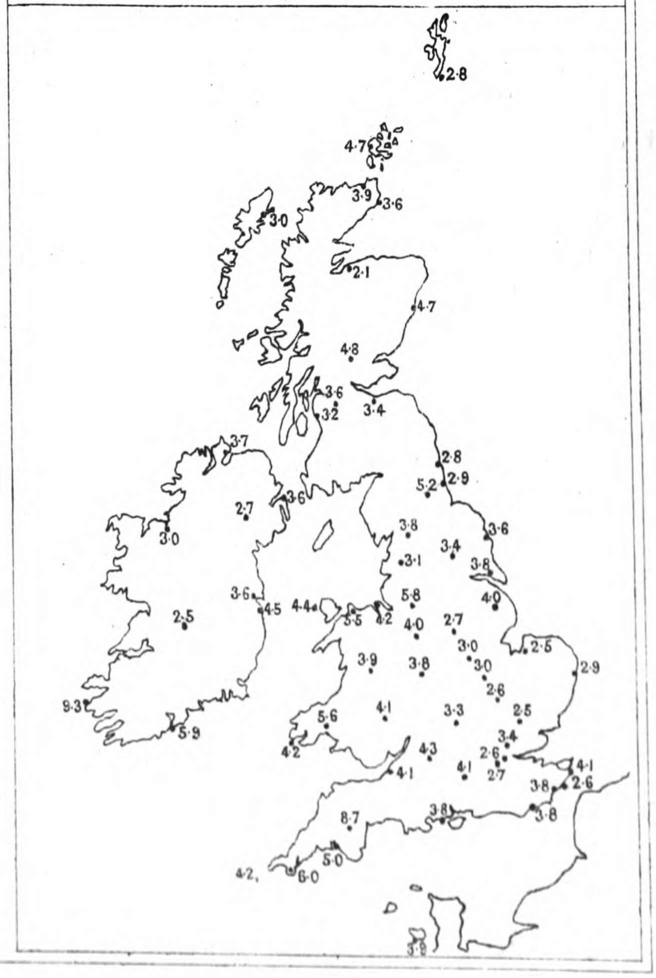
4. RAINFALL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4·1
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5·0
4·2,
6·0
3·9

To follow Wind Chart for November.

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7868

REMARKS FOR DECEMBER 1876.

(*Tables A. to C.*, DECEMBER, *with Monthly Wind and Weather Charts.*)

Wind.—On the morning of the 1st the wind blew with moderate force around a depression, which was lying to the westward of Ireland, and its direction was Southerly over England and Easterly over Scotland, while in the course of the day it backed to N.E. and N. in Ireland, and at the same time increased considerably in strength both on our south-western and north-eastern coasts. For several days a succession of depressions arrived from the West, travelling generally to the north-eastward, and with each the wind oscillated between S.W. and S.E. over the southern half of the Kingdom, while Easterly winds continued to prevail over the northern half. On the 6th, a depression lay off the Norwegian coast, and while a South-easterly gale continued to blow over Scandinavia, Westerly winds became general over the British Isles; next day, however, the wind fell light and variable, and an anticyclonic circulation began to develop itself, governed by an area of relatively high pressure off our south-western coasts, so that on the 8th Northerly winds blew over England, and Westerly winds over Scotland and Ireland, and these conditions continued with but little change until the 12th, a gradual retrograde movement going on as the high pressure centre passed to the eastward over Northern France. On the 12th a junction took place between the area of high pressure which had remained over Northern Europe and this southern area, and although Westerly winds blew temporarily in Ireland, owing to a depression off the N.W. coasts, Southerly winds became general over Great Britain, and, backing a little to the Eastward, continued to blow till the 17th. On the 18th a depression reached our western coasts and Easterly winds blew over nearly all parts of the kingdom, the only exceptions being in the neighbourhood of the centre of the disturbance. On the 19th the approach of a new depression (No. LX.) was indicated, and on the south-western coasts the direction of the wind again became South-easterly and Southerly. During the next four or five days the disturbance passed from the South of Ireland to the English Channel, and thence northwards over England and Scotland to the northwest coasts, the wind circulating very distinctly around it during its progress, but, speaking generally, Northerly and North-easterly winds blew over Ireland and West Scotland, Westerly winds over Southern England, and Southerly and South-easterly winds on the eastern coasts, while on the N.E. coast of Scotland an Easterly gale prevailed during the whole time, and at Aberdeen the anemometer recorded the high average velocity of 55 miles per hour for the extraordinarily long period of 93 consecutive hours, a very remarkable duration of so high a rate. On the 25th Easterly winds had once more become general, but next day a fresh series of depressions began to arrive, and the wind again veered to S.E. and S., and increased very much in force. Till the end of the month strong Southerly and South-westerly winds were general over nearly the whole kingdom; on the East coast they fell light for a short time on the 29th, and upon the N.E. coast strong winds from between S.E. and N.E. were experienced between the 29th and 31st. It will be seen from the monthly chart that, upon the whole Southerly and South-westerly winds predominated over the southern half of the country, and South-easterly and Easterly winds over the northern portion.

Pressure.—The distribution of mean pressure was again abnormal and similar to that shown in the charts for October and November; the mean values were, however, everywhere very low, the highest, in the S.E. of England, being but just above 29·5 inches, while in the S.W. of Ireland they were below 29·3 inches. The minima were low, and occurred with the series of depressions which arrived during the first week of the month,—at Armagh on the 3rd., Aberdeen on the 6th, and at the other observatories on the 4th. The maxima were not high, 30·275 inches at Falmouth being the highest; at the southern and western stations they occurred on the 9th and 10th, during the passage of an area of high pressure along our southern coasts, but in the North they were recorded on the 25th and 26th, at which time an anticyclonic system lying over Scandinavia had temporarily extended across the North Sea to our northern coasts. The range of pressure amounted to 2·07 inches at Falmouth.

Movements of Depressions.—During the month the depressions were both numerous and deep, but in nearly every case they followed a Northerly or North-easterly path, their centres in some cases passing outside our north-western coasts, and in others over the western and northern portions of the country, and skirting the coast of Norway. In one or two cases, however, they travelled to the eastward across England, and in one remarkable instance (No. LX.), the centre moved first south-eastward to the Channel, then northward over central England to Scotland, and then again changed its course to the westward, filling up over the North of Ireland. An area of high pressure existed over northern Europe during nearly the whole month, and was joined on the 12th by another, and smaller area, which first passed eastward over Northern France, and then, spreading out over the Continent, became merged in the larger area over Scandinavia.

Temperature.—The mean temperature, corrected for height above sea level, was high over England and Wales, but nearly normal over Ireland and Northern Scotland, the values decreasing from 49° in Cornwall to 39° over Central Scotland. The range of temperature amounted generally to between 25° and 30°, but at a few stations it exceeded the higher amount, while at others on the coasts it was less than 20°; the dates on which the extremes were recorded were very variable, but at most stations the minima occurred between the 23rd and 26th, and the maxima on the 27th or 28th; the former, as a rule, ranged from 25° to 30°, and the latter from 55° to 60°.

Vapour Tension.—The tension of vapour was greatest on the south-western coasts of England and least over Scotland, there being, however, but a very slight difference between the values for the English midlands and the latter locality. Relative humidity was very uniform in its distribution over the greater part of the kingdom; the lowest mean values were found at the south-western and north-eastern coast stations.

Rainfall.—The number of rainy days in the month was very considerable, and the total amount of rain measured was nearly everywhere largely in excess of the average. At Dartmoor the fall amounted to upwards of 21 inches, at Falmouth to nearly 11 inches, and at several other stations to between 8 and 10 inches. The largest fall in 24 hours was 2·73 inches at Dartmoor on the 26th; but on the 2nd 1·83 inches fell at Dublin, and 1·78 inches at Durham, and on the 21st 1·74 inches at Dover, while falls exceeding an inch occurred at several other stations in the course of the month.

TABLE A., DECEMBER.—SHOWING the MEAN and EXTREME PRESSURES and TEMPERATURES recorded at each of the SEVEN SELF-RECORDING OBSERVATORIES of the METEOROLOGICAL OFFICE during the Month of DECEMBER 1876; together with the MONTHLY VAPOUR TENSION, the RELATIVE HUMIDITY, and TOTAL RAINFALL.

NAMES OF OBSERVATORIES.	PRESSURE at 32° F. and the Mean Sea Level (In English Inches).						TEMPERATURE in the Shade (In Degrees Fahrenheit).						HYGROMETRIC VALUES.		RAINFALL (In English Inches).
	Mean for the Month.	Extremes.				Range.	Mean for the Month.	Extremes.				Range.	Tension of Vapour (In English Inches).	Relative Humidity (Saturation=100).	
		Minimum.		Maximum.				Minimum.		Maximum.					
		Reading.	Date.	Reading.	Date.			Reading.	Date.	Reading.	Date.				
	ins.	ins.	D. H.	ins.	D. H.	ins.	°	°	D. H.	°	D. H.	°	in.	%	ins.
Valencia -	29·281	28·442	3rd, Midt. 4th, 1 a.m.	30·203	9th, 11 a.m.	1·761	47·0	34·4	25th, 9 a.m.	54·8	11th, 10 p.m.	20·4	·271	85	9·584
Armagh - -	·331	·456	3rd, Noon	·147	9th, 4 p.m.	1·691	42·6	29·8	15th, 2 a.m.	51·2	27th, 6 p.m.	21·4	·247	90	7·013
Glasgow - -	·369	·395	4th, 4 p.m.	·172	26th, 5 a.m.	1·777	41·0	29·0	24th, 6 a.m.	50·9	3rd, 5 p.m.	21·9	·225	88	6·514
Aberdeen - -	·454	·452	6th, 6 a.m.	·320	25th, 11 p.m.	1·768	40·5	31·0	21st, 5 a.m. 24th, 7 p.m.	48·2	4th, 6 p.m.	17·2	·221	88	9·455
Falmouth - -	·420	·203*	4th, 3 a.m.	·275	9th, 8 p.m.	2·072	48·1	34·9	25th, 7 a.m.	57·9	2nd, 4 p.m.	23·0	·289	86	10·763
Stonyhurst - -	·414	·358	4th, 8 a.m.	·190	26th, 9 a.m.	1·832	42·1	27·1	23rd, 7 a.m.	53·8†	28th, ?	26·7	·236	88	4·995
Kew - -	29·493	28·381	4th, 11 a.m.	30·216	10th, 10 a.m.	1·835	44·5	27·7	23rd, 1 a.m.	55·8	2nd, Midt.	28·1	·259	88	5·846

* Approximate reading.

† Corrected reading of Phillips' maximum thermometer obtained from weather sheets.

TABLE B., DECEMBER.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at
The values are not
(The Stations are grouped in Districts, and then arranged in order of

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 9 a.m. and 9 p.m.	AIR TEMPERATURE.									
						Means of			Absolute Extremes.			
			At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.
		ins.	°	°	°	°	°	°	°		°	
0. SCOTLAND, N.	Sandwick Manse (Orkneys)	29·472	39·1	38·6	38·9	36·7	42·2	39·5	27·6	21st	48·8	9th
1. SCOTLAND, E.	Glenalmond	29·429	37·1	37·0	37·1	32·9	41·0	37·0	21·1	23rd	50·0	12th
2. ENGLAND, N.E.	Seaham	29·460	42·4	42·4	42·4	39·1	45·6	42·4	29·8	23rd	52·7	28th
	Durham*	29·412	40·6	40·2	40·4	36·7	44·2	40·5	27·5	26th	52·6	28th
	Hull	29·471	42·1	42·6	42·4	38·8	45·6	42·2	30·0	23rd, 26th	54·5	28th
	Kelstern (Calcethorpe)	29·473	40·0	41·1	40·6	37·5	44·5	41·0	25·0	23rd	54·8	28th
3. ENGLAND, E.	Hillington	29·473	41·5	42·6	42·1	37·7	46·3	42·0	19·2	23rd	56·1	28th
	Audley End	29·508	43·1	43·8	43·5	39·5	47·2	43·4	25·6	23rd	57·9	2nd
	Chigwell Row	29·528	43·3	43·8	43·6	39·9	47·2	43·6	30·3	26th	55·0	3rd, 28th
4. MIDLAND COUNTIES.	Buxton	29·469	39·3	39·8	39·6	35·5	43·8	39·7	20·0	26th	54·0	28th
	Cheadle	29·445	39·8	41·1	40·5	36·9	44·4	40·7	23·4	23rd	56·6	3rd
	Leicester	29·456	42·4	43·2	42·8	39·5	46·3	42·9	26·5	26th	56·9	28th
	Uppingham	29·462	40·8	41·2	41·0	37·4	45·1	41·3	23·5	26th	55·7	28th
	Oscott	29·439	41·2	41·4	41·3	38·3	45·3	41·8	27·0	26th	55·9	28th
	Churchstoke	29·423	41·8	42·5	42·2	38·2	46·4	42·3	29·0	26th	55·6	28th
	Hereford	29·425	42·6	43·1	42·9	38·8	47·2	43·0	21·6	24th	56·2	28th
5. ENGLAND, S.	Marlborough	29·474	42·4	42·9	42·7	39·4	47·0	43·2	28·6	23rd	55·5	3rd
	Strathfield Turgiss	29·486	43·2	43·4	43·3	39·3	47·7	43·5	26·0	23rd	57·0	3rd
	Ramsgate	29·537	45·7	46·1	45·9	42·1	49·1	45·6	29·0	26th	55·2	2nd, 3rd
	Folkestone	29·521	45·4	45·9	45·7	—	49·2	—	—	—	55·4	2nd, 3rd
	Hastings	29·522	45·2	46·4	45·8	42·4	49·3	45·9	31·4	26th	55·3	2nd
6. SCOTLAND, W.	——	—	—	—	—	—	—	—	—	—	—	—
7. ENGLAND, N.W.	Hawes	29·440	39·5	39·5	39·5	36·0	43·0	39·5	25·0	24th	50·6	28th
	Llandudno	29·372	44·7	44·4	44·6	40·9	48·3	44·6	30·0	26t	55·2	27th
8. ENGLAND, S.W.	Caermarthen	29·403	44·5	43·6	44·1	39·2	49·4	44·3	21·1	23rd	57·5	3rd
	Dartmoor	29·518	42·2	42·2	42·2	38·5	45·9	42·2	28·6	25th	53·1	2nd
9. IRELAND, N.	Markree Castle	29·288	40·5	41·9	41·2	36·8	46·8	41·8	25·3	8th	52·2	27th
10. IRELAND, S.	Dublin	29·344	44·1	44·9	44·5	41·0	48·2	44·6	30·3	24th	55·2	27th
	Parsonstown	29·317	41·6	42·2	41·9	37·9	47·9	42·9	28·5	24th	55·7	27th
CHANNEL	Jersey (St. Aubin's)	29·545	48·7	48·1	48·4	44·7	52·1	48·4	35·8	25th	61·0	2nd

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* At Durham the observations were taken at 10 a.m. and 10 p.m. each day.

STATIONS of the SECOND ORDER in the BRITISH ISLANDS, during the Month of DECEMBER 1876.
corrected for Diurnal Range.
Latitude, beginning in each case with the Station lying furthest North.)

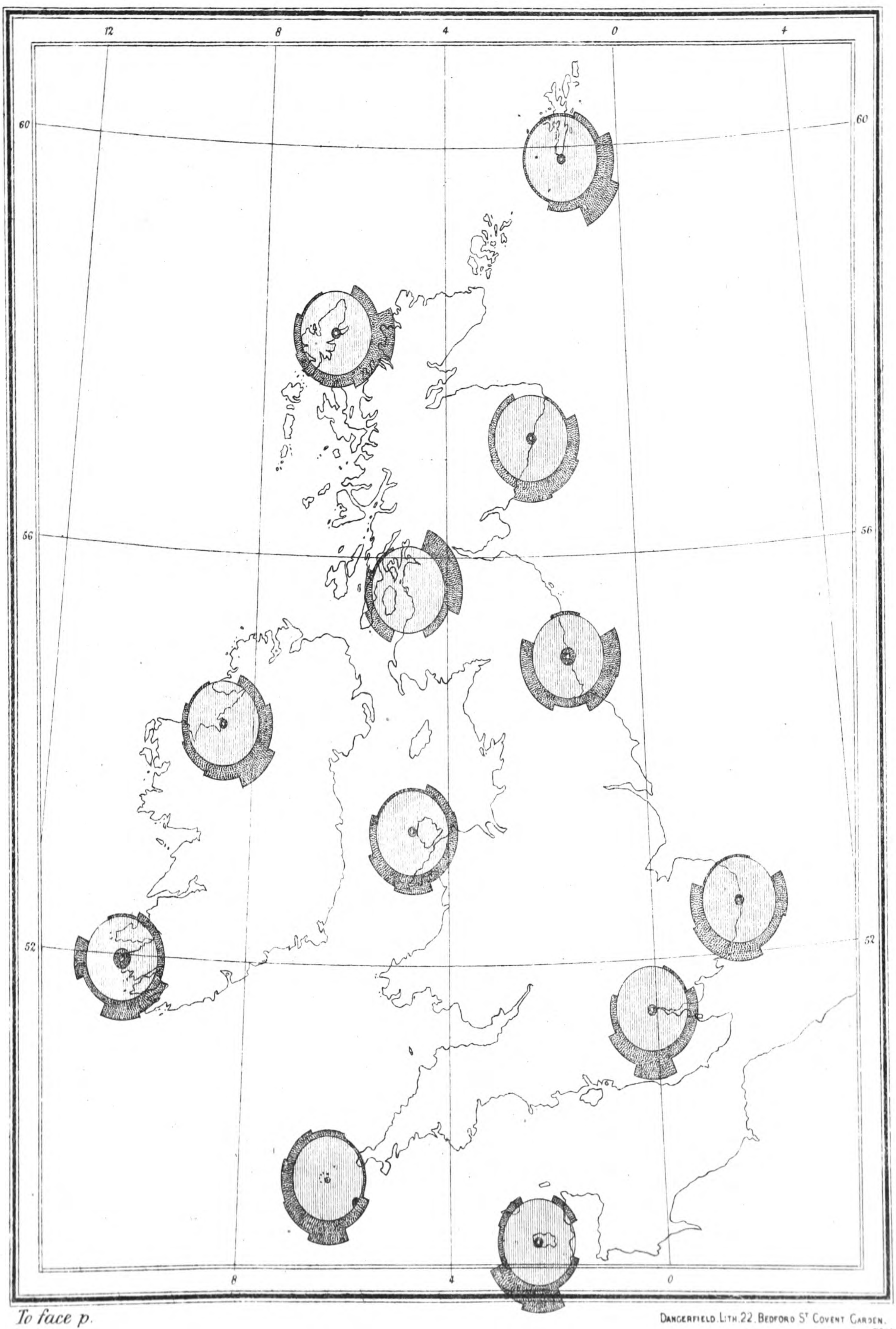
TENSION OF VAPOUR.			RELATIVE HUMIDITY.			AMOUNT OF CLOUD (0 to 10.)			RAINFALL.			WEATHER. No. of Days of							WIND. No. of Observations of								
At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	At 9 a.m.	At 9 p.m.	Mean of 9 a.m. and 9 p.m.	Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
in.	in.	in.	°/o	°/o	°/o				ins.	ins.																	
·215	·217	·216	90	93	92	8·4	8·1	8·3	5·950	·770	30th	27	3	0	0	3	21	7	1	1	26	14	8	4	4	1	3
·213	·213	·213	95	95	95	9·3	8·8	9·1	12·720	1·350	26th	25	8	0	0	0	25	0	0	5	14	13	4	10	5	0	11
·254	·254	·254	94	94	94	7·6	5·9	6·8	6·250	·910	30th	19	5	2	0	3	15	3	0	1	13	12	15	8	9	1	3
·238	·235	·237	94	94	94	8·4	6·7	7·6	10·146	1·781	2nd	21	5	0	0	2	18	0	0	7	10	11	19	9	2	0	4
·255	·253	·254	95	93	94	8·5	5·2	6·9	4·890	·700	19th	22	3	0	0	1	14	0	0	7	5	15	3	17	4	3	8
·240	·250	·245	95	96	95	8·1	6·9	7·5	5·663	·700	19th	26	5	1	0	1	15	1	2	0	11	14	12	17	6	0	0
·242	·255	·248	92	93	93	8·5	7·7	8·1	3·679	·355	19th	25	4	0	0	2	20	2	0	3	6	20	8	14	3	6	2
·263	·270	·266	95	94	94	8·1	6·7	7·4	4·620	·600	23rd	23	2	0	0	2	18	0	0	5	1	19	2	24	3	4	4
·268	·267	·268	96	93	95	9·2	7·4	8·3	5·410	1·500	23rd	22	3	1	0	0	19	2	1	5	13	9	18	7	1	3	5
·216	·226	·221	88	90	89	8·6	8·6	8·6	8·410	1·200	5th	20	0	0	0	1	19	2	2	1	7	11	5	13	13	6	4
·225	·236	·230	92	91	92	8·0	7·5	7·8	6·370	·730	2nd	25	7	1	0	1	19	0	2	7	3	10	7	12	5	8	8
·250	·253	·252	92	90	91	9·0	7·3	8·2	4·810	·640	23rd	25	5	0	0	2	21	1	0	5	9	10	17	16	2	0	3
·245	·246	·246	94	93	94	9·2	7·8	8·5	5·062	·825	24th	22	5	3	0	2	20	2	2	4	1	18	11	19	3	2	2
·249	·249	·249	94	94	94	8·9	7·8	8·4	5·350	·740	31st	23	5	0	0	2	24	4	2	7	11	8	14	11	3	4	2
·249	·248	·249	93	89	91	7·4	5·9	6·7	4·972	·746	30th	20	4	0	0	0	8	2	2	4	5	18	4	8	2	8	11
·258	·252	·255	93	89	91	8·5	6·9	7·7	6·056	·850	31st	24	2	0	0	1	18	0	1	4	4	9	10	7	4	3	20
·255	·256	·255	94	93	94	8·8	7·8	8·3	7·198	·914	7th	22	2	0	0	2	22	0	1	4	6	4	15	7	8	2	15
·262	·265	·264	93	92	93	8·6	7·0	7·8	5·241	·472	7th	24	2	0	0	3	22	0	3	4	4	7	13	14	6	5	6
·284	·286	·285	92	90	91	9·2	7·7	8·5	4·990	1·000	21st	18	0	0	0	1	22	11	4	2	7	3	16	18	6	2	4
·276	·280	·278	92	92	92	8·7	7·7	8·2	6·320	1·330	21st	22	1	3	1	0	19	5	4	1	5	11	21	9	4	7	0
·279	·286	·283	91	89	90	8·7	7·9	8·3	7·190	·880	23rd	24	0	3	1	2	21	7	6	5	4	6	16	18	1	6	0
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
·232	·231	·232	94	93	94	8·7	8·4	8·6	10·260	1·470	30th	25	7	1	0	1	23	0	1	0	20	6	5	13	10	1	6
·255	·254	·254	86	87	86	7·4	6·9	7·2	4·170	·670	20th	18	2	1	0	1	16	2	2	1	7	6	15	13	17	1	0
·281	·272	·277	93	94	94	7·5	6·5	7·0	9·280	1·550	26th	24	2	0	0	3	15	0	[illegible]		9	10	8	6	5	2	20
·263	·260	·262	96	95	95	8·6	8·1	8·4	21·380	2·730	26th	29	2	1	0	0	21		3	2	3	6	11	19	2	4	12
·234	·244	·239	91	91	91	6·5	6·8	6·7	5·487	·862	2nd	27	3	2	0	6	15	0	0	6	11	[illegible]	10	7	4	2	3
·265	·259	·262	90	86	88	7·8	6·4	7·1	7·566	1·828	2nd	22	3	4	0	0	12	3	2	0	9	13	7	11	14	3	3
·250	·254	·252	93	93	93	7·5	7·0	7·3	4·926	·725	26th	30	2	0	0	3	16	0	2	3	7	19	9	14	3	2	3
·292	·289	·291	85	85	85	8·3	6·3	7·3	6·730	1·027	5th	29	0	3	1	0	11	5	1	4	0	3	24	18	4	6	2

TABLE C., DECEMBER.—Giving a SUMMARY of the METEOROLOGICAL OBSERVATIONS made at TELEGRAPHIC REPORTING STATIONS in the BRITISH ISLANDS, during the Month of DECEMBER, 1876. Observations are made at 8 a.m. daily.

(The Stations are grouped in Districts, and then arranged in order of Latitude, beginning in each case with the Station lying furthest North.)

NAMES OF DISTRICTS.	NAMES OF STATIONS.	Mean Height of Barometer (at 32° Fahrenheit and Mean Sea Level) from Observations made at 8 a.m.	AIR TEMPERATURE.								TENSION OF VAPOUR.	RELATIVE HUMIDITY.	AMOUNT OF CLOUD.	RAINFALL.			WEATHER, No. of Days of							WIND, No. of Observations of								
				Means of			Absolute Extremes.																									
			At 8 a.m.	Minima.	Maxima.	Min. and Max. combined.	Minimum.	Date.	Maximum.	Date.				Total Fall in the Month.	Maximum Fall in One Day.	Date.	Rain.	Snow.	Hail.	Thunderstorms.	Clear Sky.	Overcast.	Gales.	North.	N.E.	East.	S.E.	South.	S.W.	West.	N.W.	Calms.
0. SCOTLAND, N.	Sumburgh Head	ins. 29·529	° 39·2	° 35·4	° 41·5	° 38·5	° 25	21st, 22nd, 23rd.	° 48	5th, 6th, 7th, 10th, 12th.	in. ·201	% 84	7·6	ins. 1·54	ins. 0·38	12th	19	1	0	0	2	11	5	1	2	7	13	4	1	1	1	1
	Stornoway	29·361	40·8	36·8	43·5	40·2	28	1st	49	5th, 11th	·225	89	6·4	2·68	0·38	5th	25	1	0	0	4	11	6	0	3	10	5	4	4	3	1	1
	Thurso	29·435	39·4	35·5	42·7	39·1	27	23rd	52	6th, 10th	·211	88	9·1	7·23	0·98	23rd	31	3	0	0	1	25	4	0	1	8	10	8	3	0	0	1
	Wick	29·443	40·7	36·4	42·9	39·7	28	21st	49	30th	·224	88	7·4	3·70	0·81	31st	22	2	0	0	4	16	7	0	0	9	8	8	1	3	1	1
1. SCOTLAND, E.	Nairn	29·402	38·7	35·2	41·9	38·6	27	26th	48	3rd, 4th, 11th, 12th.	·208	88	7·2	2·14	0·33	27th	21	0	0	0	6	17	3	0	2	6	4	2	2	4	0	11
	Aberdeen	29·411	40·5	37·2	43·7	40·5	32	14th, 21st, 22nd, 25th, 26th.	49	3rd, 4th, 5th, 7th.	·219	87	7·6	8·95	1·12	23rd	25	3	1	0	7	22	5	0	1	6	7	9	3	2	2	1
	Leith	29·386	41·4	37·0	46·8	41·9	28	24th	54	5th, 11th	·242	93	8·4	5·71	0·94	31st	21	0	0	0	2	22	1	0	0	5	9	4	7	6	0	0
2. ENGLAND, N.E.	Shields	29·426	42·7	39·5	45·9	42·7	30	1st	52	28th, 31st	·237	86	8·2	5·78	0·81	2nd	22	0	0	0	5	23	11	1	0	7	6	3	6	6	0	2
	Scarborough	29·443	42·4	38·7	45·3	42·0	28	23rd	55	28th	·252	93	8·5	5·52	0·69	20th	22	0	0	0	4	24	6	1	1	4	7	4	8	4	0	2
	York	29·445	41·7	37·5	46·1	41·8	29	1st, 23rd, 24th, 27th.	57	28th	·238	91	8·4	6·01	0·66	2nd	23	1	0	0	2	21	1	1	2	5	5	8	6	3	1	0
3. ENGLAND, E.	Yarmouth	29·502	42·9	38·9	46·5	42·7	28	26th, 27th	55	28th	·256	93	7·7	3·47	0·49	5th	23	0	0	0	2	15	5	1	0	5	4	7	7	5	1	1
	Cambridge	29·487	42·1	37·9	48·5	43·2	26	26th	56	3rd, 28th, 29th.	·251	93	8·9	3·67	0·56	24th	27	0	0	0	2	25	1	1	3	2	7	7	10	0	1	0
4. MIDLAND COUNTIES.	Nottingham	29·462	41·6	37·5	46·5	42·0	26	23rd	58	28th	·248	94	8·3	4·99	0·62	2nd	28	2	0	0	2	20	1	1	2	1	7	8	5	1	2	4
	Oxford	29·461	43·2	39·9	47·7	43·8	29	23rd	57	1st, 3rd, 28th.	·255	91	9·4	5·05	0·50	2nd, 3rd	25	0	0	0	0	28	0	2	1	3	7	3	7	1	0	7
5. ENGLAND, S.	London	29·484	43·8	40·5	49·1	44·8	26	23rd	57	1st, 2nd	·267	94	8·4	5·82	1·24	23rd	23	0	0	0	2	21	6	0	1	4	4	11	6	2	0	3
	Dover	29·510	46·2	43·0	49·3	46·2	30	27th	55	1st, 2nd, 3rd.	·281	91	6·8	7·31	1·74	21st	25	0	0	0	0	7	3	1	2	6	2	7	9	1	2	1
	Hurst Castle	29·481	47·3	42·1	49·9	46·0	29	25th	58	2nd	·309	95	8·2	7·45	0·79	26th	24	0	0	0	3	23	7	2	2	1	2	6	9	5	4	0
6. SCOTLAND, W.	Ardrossan	29·368	42·5	39·5	46·4	43·0	30	26th	52	3rd, 6th	·231	85	8·5	7·31	1·41	26th	25	0	0	0	1	20	3	0	9	9	3	0	6	3	1	0
7. ENGLAND, N.W.	Liverpool	29·390	41·9	38·9	46·3	42·6	29	24th, 27th	54	27th, 28th	·232	88	6·4	4·36	0·57	2nd	21	0	0	0	10	16	2	2	1	7	10	5	2	3	0	1
	Holyhead	29·340	45·2	41·8	48·8	45·3	31	26th	54	27th	·276	92	7·3	6·41	0·78	14th	25	0	0	0	2	11	3	1	3	4	4	8	6	3	1	1
8. ENGLAND, S.W.	Pembroke	29·348	46·9	43·8	50·1	47·0	33	23rd, 24th, 25th.	55	2nd, 15th	·285	90	6·5	6·46	1·41	26th	24	0	0	0	6	12	10	2	3	3	6	6	6	3	2	0
	Portishead	29·423	44·8	39·8	50·1	45·0	25	24th	58	2nd	·273	92	7·9	6·03	0·60	27th	24	0	0	0	2	16	8	2	2	4	4	7	6	5	0	1
	Plymouth	29·422	46·1	42·3	51·5	46·9	30	24th	59	2nd	·293	94	7·9	8·88	1·22	26th	26	0	0	0	7	24	7	2	0	2	7	4	6	2	6	2
9. IRELAND, N.	Greencastle	29·287	42·1	37·6	46·5	42·1	30	1st	52	10th	·244	91	8·4	5·85	0·75	2nd	25	0	0	0	5	26	1	2	3	8	4	4	3	5	2	0
	Donaghadee	29·334	42·4	39·0	45·9	42·5	30	1st, 24th	50	2nd, 3rd, 27th.	·262	97	6·6	7·46	1·18	2nd	25	0	0	0	5	12	6	0	1	7	5	5	7	6	0	0
10. IRELAND, S.	Kingstown	29·326	45·4	42·3	48·8	45·6	34	22nd	55	27th	·267	89	7·2	8·09	1·33	2nd	22	0	0	0	4	13	5	1	0	2	9	9	0	7	3	0
	Roche's Point	29·306	46·0	42·5	49·7	46·1	34	23rd, 25th	52	1st, 2nd, 3rd, 4th, 6th, 10th, 11th, 13th, 26th, 28th, 29th, 30th, 31st.	·278	90	6·5	9·09	1·62	26th	23	0	0	0	7	13	7	7	2	0	3	7	6	3	3	0
	Valencia	29·272	46·3	41·0	51·6	46·3	34	22nd, 23rd, 25th, 26th.	56	27th	·268	86	6·6	9·14	1·31	26th	30	0	0	0	4	9	10	1	2	2	5	7	2	5	4	3
CHANNEL	Scilly (St. Mary's)	29·386	50·2	46·7	52·5	49·6	40	24th, 26th	57	2nd	·317	88	9·1	8·46	1·06	3rd	27	0	0	0	0	23	12	2	1	1	3	9	6	5	4	0

MONTHLY WIND CHART FOR DECEMBER 1876.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52
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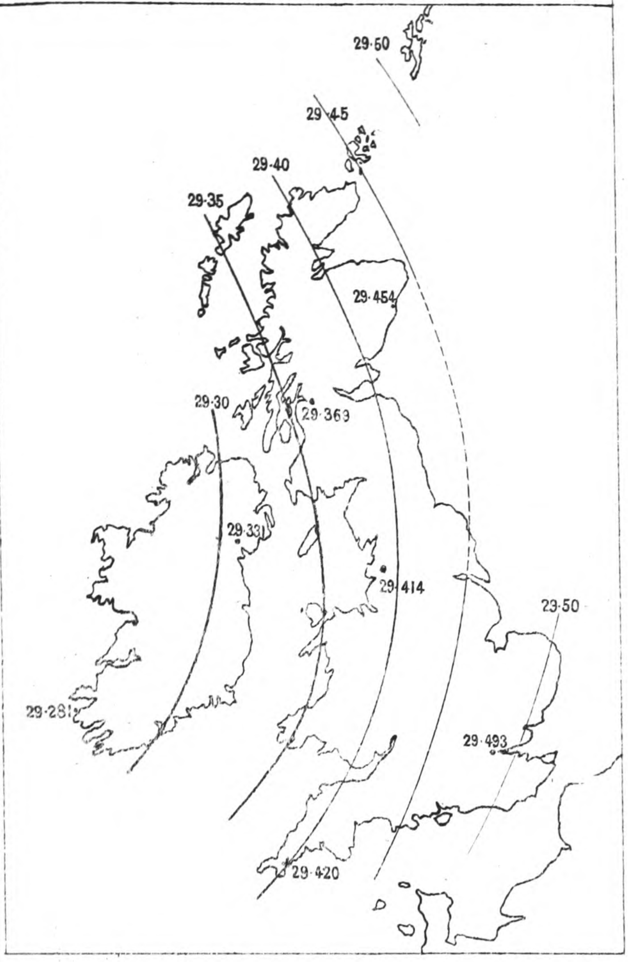
To face p.

DANGERFIELD LITH. 22, BEDFORD ST COVENT GARDEN.
7368

MONTHLY WEATHER CHART DECEMBER 1876

1. DISTRIBUTION OF MEAN PRESSURE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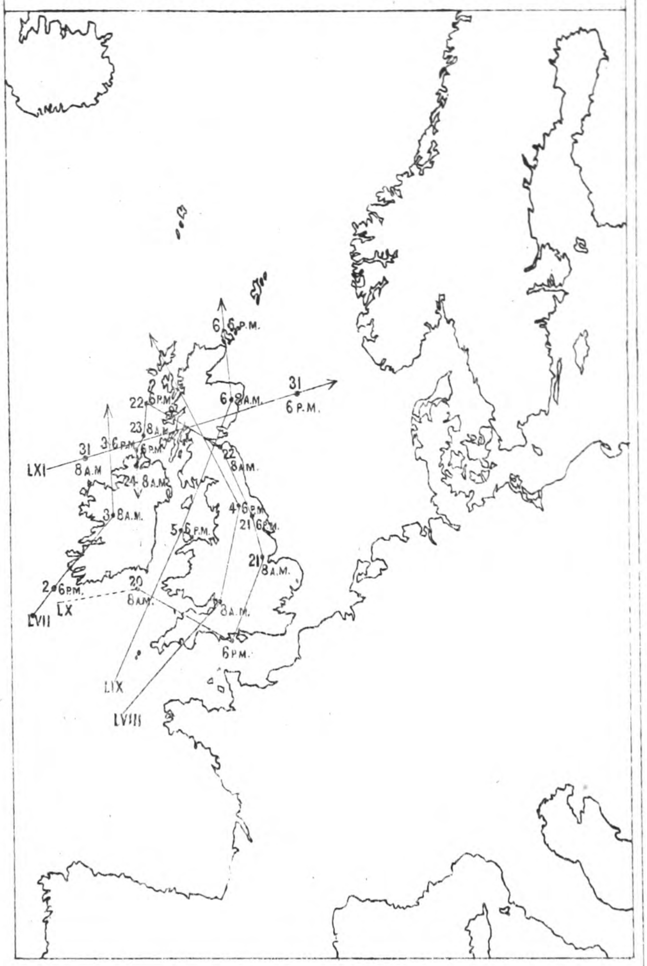
2. MOVEMENTS OF DEPRESSIONS.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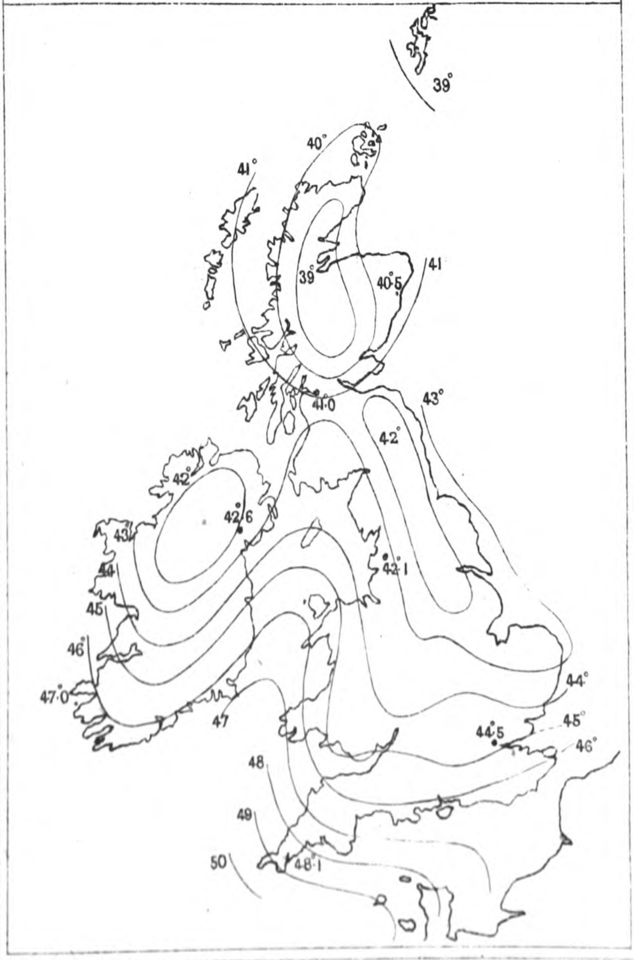
6 8 A.M.
31 6 P.M.
22 6 P.M.
23 8 A.M.
3 6 P.M.
6 P.M.
31 8 A.M
LXI
24 8 A.M.
22 8 A.M.
3 8 A.M.
4 6 P.M.
21 6 P.M.
5 6 P.M.
21 8 A.M.
2 6 P.M.
20 8 A.M.
LX
LVII
8 A.M.
6 P.M.
LIX
LVIII

3. DISTRIBUTION OF MEAN TEMPERATURE.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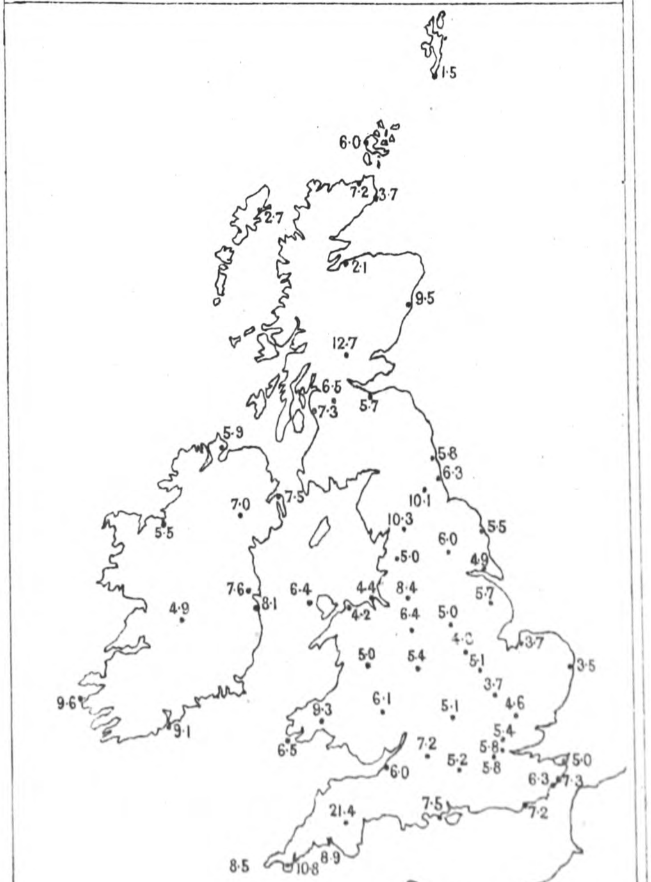
44·5
45°
46°
47
48
49
50
48·1

4. RAINFALL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6·5
7·2
5·8
5·2
5·8
5·0
6·0
6·3
7·3
21·4
7·5
7·2
8·5
10·8
8·9
6·7

To follow Wind Chart for December.

DANGERFIELD LITH 22 BEDFORD S^T COVENT GARDEN.
7968

APPENDIX.

APPENDIX I.

TABLE I.—MEAN MONTHLY RESULTS from the continuous RECORDS at the SEVEN BRITISH OBSERVATORIES for the Year 1876.

VALENCIA.

1876. MONTHS.	THERMOMETER.					BAROMETER.					VAPOUR TENSION.
	Means.	Extremes.				Means.	Extremes.				
		Maximum.		Minimum.			Maximum.		Minimum.		
		Day.	Ther.	Day.	Ther.		Day.	Bar.	Day.	Bar.	
	°	D. H.	°	D. H.	°	ins.	D. H.	ins.	D. H.	ins.	in.
January - -	45·7	3rd, 5 a.m.	55·0	22nd, 1 a.m.	31·0	30·123	**15th, 10 a.m.**	**30·628**	2nd, 8 a.m.	29·555	·262
February - -	46·5	17th, 1 p.m.	53·9	7th, 2 a.m.	32·4	29·693	4th, Noon	·305	18th, 6 a.m.	28·981	·261
March - -	43·9	2nd, 8 p.m.	54·0	**9th, 4 a.m.**	**30·9**	·594	19th, 2 a.m.	·390	**10th, 2 a.m.**	**·357**	·225
April - -	48·5	7th, 1 p.m.	59·5	11th, 11 p.m.	33·3	29·789	5th, 1 p.m. & 9 p.m.	·432	18th, 5 a.m.	28·859	·283
May - - -	51·9	7th, 4 p.m.	66·1	2nd, 5 a.m.	38·2	30·175	4th, 1 a.m.	·412	24th, 4 a.m.	29·687	·284
June - -	55·4	25th, 5 p.m.	74·6	1st, 5 a.m.	44·8	29·960	10th, 10 a.m.	·356	21st, 5 a.m.	·521	·348
July - - -	59·8	**15th, 4 p.m.**	**79·5**	27th, 5 a.m.	46·2	30·072	12th, 10 p.m.	·415	7th, 6 p.m.	·512	·406
August - -	60·2	12th, 4 p.m.	78·5	25th, 6 a.m.	48·0	29·919	10th, 10 a.m.	·333	2nd, Midt.	·040	·417
September - -	55·9	23rd, 1 p.m.	64·2	29th, 5 a.m.	47·0	·769	19th, 8 p.m.	·179	24th, 6 a.m.	29·216	·371
October - -	54·0	20th, 3 p.m.	62·6	31st, 11 p.m.	38·3	·747	31st, Midnt.	·404	11th, 10 a.m.	28·680	·350
November - -	*49·7	14th, 2 p.m.	59·3	9th, 10 p.m.	35·3	*·708	1st, 2 a.m.	†·401	14th, 7 p.m.	·847	·306
December - -	47·0	11th, 10 p.m.	54·8	25th, 9 a.m.	34·4	29·256	9th, 11 a.m.	30·178	3rd, Midnt. & 4th, 1 a.m.	28·418	·271
Annual - -	51·5	—	—	—	—	29·817	—	—	—	—	·315

* Mean for one day is approximate.

† Trace rather faint.

Table I.—Mean Monthly Results, &c.—*continued.*

ARMAGH.

1876. MONTHS.	THERMOMETER.					BAROMETER.					VAPOUR TENSION.
	Means.	Extremes.				Means.	Extremes.				
		Maximum.		Minimum.			Maximum.		Minimum.		
		Day.	Ther.	Day.	Ther.		Day.	Bar.	Day.	Bar.	
	°	D. H.	°	D. H.	°	ins.	D. H.	ins.	D. H.	ins.	in.
January - -	41·2	3rd, 3 p.m.	53·0	**14th, 9 a.m.**	**23·8**	29·934	**14th, 10 a.m.**	**30·427**	20th, 1 a.m.	29·328	·229
February - -	40·0	22nd, 2 p.m. 28th, 1 p.m.	51·9	12th, 6 a.m.	24·1	·465	4th, 7 p.m.	·006	18th, Noon	28·680	·218
March - -	38·7	3rd, Noon	55·1	18th, 11 p.m.	28·0	·287	19th, 7 p.m. & 8 p.m.	·074	9th, 3 p.m. 10th, 4 a.m.	·323	·202
April - - -	45·4	4th, 5 p.m.	59·9	13th, 6 a.m.	28·4	·599	6th, 10 a.m.	·238	19th, 5 p.m.	28·747	·247
May - - -	50·0	6th, 3 p.m.	62·9	2nd, 5 a.m.	32·7	·975	9th, 9 a.m.	·273	22nd, Noon	29·379	·263
June - - -	55·1	26th, 2 p.m.	75·3	10th, 4 a.m.	42·0	·728	10th, 9 a.m.	·095	4th, Midnt.	·189	·338
July - - -	59·4	**16th, 1 p.m.**	**84·3**	27th, 5 a.m.	45·2	·814	15th, 1 a.m.	·235	28th, 7 a.m.	29·259	·389
August - -	58·1	14th, 2 p.m.	76·7	25th, 1 a.m.	42·8	·684	10th, Noon & 10 p.m.	·098	3rd, 5 a.m.	28·789	·389
September - -	*52·8	4th, 1 p.m.	65·2	15th, 5 a.m.	39·5	·554	20th, 10 a.m.	·084	5th, 3 a.m.	29·007	·345
October - -	51·5	6th, 3 p.m.	64·0	31st, 11 p.m.	35·5	·608	31st, Midnt.	·216	11th, 6 p.m.	28·451	·332
November - -	43·9	15th, 2 p.m.	55·7	30th, 5 a.m.	27·0	·587	1st, 9 a.m.	30·224	14th, Midnt.	·900	·256
December - -	42·6	27th, 6 p.m.	51·2	15th, 2 a.m.	29·8	29·103	9th, 4 p.m.	29·914	**3rd, Noon**	**28·239**	·247
Annual - -	48·2	—	—	—	—	29·612	—	—	—	—	·288

* Means for two days are approximate.

GLASGOW.

	°	D. H.	°	D. H.	°	ins.	D. H.	ins.	D. H.	ins.	in.
January - -	40·6	4th, Noon 19th, 3 p.m.	50·0	**14th, 7 a.m.**	**22·2**	29·929	**7th, 6 a.m.**	**30·421**	20th, 4 a.m.	29·198	·208
February - -	37·4	1st, 5 a.m.	49·5	11th, 9 a.m.	23·0	·455	6th, 10 p.m.	·004	18th, 4 p.m.	28·579	·183
March - -	38·1	3rd, 3 p.m.	53·0	20th, 5 a.m.	25·0	·201	19th, 10 p.m.	·028	**9th, Midt.**	**·085**	·184
April - -	44·2	8th, 1 p.m.	60·9	13th, 6 a.m.	26·3	·603	6th, 10 a.m.	·221	19th, 4 p.m.	28·742	·226
May - - -	49·7	6th, 4 p.m.	63·8	2nd, 5 a.m.	32·8	†·951	9th, 7 a.m.	·326	22nd, 5 p.m.	29·339	·246
June - - -	55·5	**20th, 3 p.m.**	**81·3**	1st, 4 a.m.	41·0	·706	10th, 9 a.m.	·026	5th, 3 a.m.	·060	·321
July - - -	57·8	16th, 3 p.m.	80·8	10th, 5 a.m.	43·0	·757	15th, 7 a.m.	·234	28th, 11 a.m.	29·175	·367
August - -	57·7	**14th, 4 p.m.**	**81·3**	25th, 4 a.m.	39·0	·653	10th, 10 p.m.	·076	3rd, 9 a.m.	28·797	·368
September - -	52·1	21st, 3 p.m. 22nd, 4 p.m.	66·2	30th, 6 a.m.	38·7	·531	20th, 11 a.m.	·140	5th, 5 a.m.	·877	·317
October - -	*50·5	4th, 2 p.m.	62·5	31st, Midnt.	35·2	·635	31st, 10 p.m. & Midnt.	·152	11th, 4 p.m.	28·482	·302
November - -	40·5	5th, 1 p.m.	55·5	10th, 6 a.m.	24·4	·627	1st, 10 a.m.	30·161	15th, 3 a.m.	29·055	·217
December - -	41·0	3rd, 5 p.m.	50·9	24th, 6 a.m.	29·0	29·165	26th, 5 a.m.	29·960	4th, 4 p.m.	28·201	·225
Annual - -	47·1	—	—	—	—	29·601	—	—	—	—	·264

* Mean for one day is approximate.

† Means for two days are approximate.

Table I.—Mean Monthly Results, &c.—*continued.*

ABERDEEN.

1876. Months.	Thermometer.					Barometer.					Vapour Tension.
	Means.	Extremes.				Means.	Extremes.				
		Maximum.		Minimum.			Maximum.		Minimum.		
		Day.	Ther.	Day.	Ther.		Day.	Bar.	Day.	Bar.	
	°	D. H.	°	D. H.	°	ins.	D. H.	ins.	D. H.	ins.	in.
January	39·2	31st, 3 p.m.	50·8	**9th, 11 a.m.**	**23·0**	30·012	**7th, 8 a.m.**	**30·596**	20th, 5 a.m.	29·131	·201
February	36·9	22nd, 2 p.m.	50·0	10th, 7 a.m.	25·6	29·558	6th, 11 p.m. & Midt.	·137	18th, 6 p.m.	28·698	·187
March	37·3	3rd, 5 p.m.	51·6	18th, 2 p.m.	24·0	·244	21st, Midnt.	·082	**9th, Midt. 10th, 1 a.m.**	**27·928**	·184
April	42·8	8th, 1 p.m.	60·3	13th, 5 a.m.	26·6	29·724	6th, 10 a.m.	·328	20th, 5 a.m.	28·884	·227
May	47·7	29th, 3 p.m.	66·8	1st, 4 a.m.	33·6	30·060	9th, 10 a.m.	·489	23rd, 4 a.m.	29·438	·250
June	54·2	25th, 2 p.m.	76·7	4th, 3 a.m.	39·3	29·825	10th, 11 a.m. & Noon.	·133	5th, 6 a.m.	·122	·306
July	58·1	**16th, 4 p.m.**	**84·9**	3rd, 4 a.m.	43·6	*·827	15th, 10 a.m.	·345	28th, 4 p.m.	29·212	·354
August	55·9	11th, 3 p.m.	73·5	28th, 3 a.m.	39·4	·757	12th, 8 a.m.	·118	3rd, 2 p.m.	28·894	·354
September	50·8	5th, 2 p.m.	63·4	3rd, 4 a.m.	37·7	·647	20th, 11 a.m.	·278	5th, 9 a.m. & 10 a.m.	·971	·323
October	49·3	7th, 2 p.m. 8th, 1 p.m.	60·0	30th, Midnt.	†33·8	‡·770	21st, 11 a.m. 22nd, 8 p.m. & 10 p.m.	·308	11th, 5 p.m.	§28·607	·299
November	42·0	3rd, 2 p.m.	55·4	10th, 7 p.m.	24·0	·779	4th, 11 a.m.	·269	28th, 6 a.m. & 7 a.m.	29·196	·227
December	40·5	4th, 6 p.m.	48·2	21st, 5 a.m. 24th, 7 p.m.	31·0	29·356	25th, 11 p.m.	30·118	6th, 6 a.m.	28·359	·221
Annual	46·2	—	—	—	—	29·713	--	—	—	—	·261

* Mean for one day is approximate.

‡ Means for two days are approximate.

† Probable minimum ; trace lost for 6 hours.

§ Lowest reading recorded, but trace lost for 13 hours.

FALMOUTH.

	°	D. H.	°	D. H.	°	ins.	D. H.	ins.	D. H.	ins.	in.
January	42·6	2nd, 3 p.m.	53·2	**8th, 9 a.m.**	**29·0**	30·030	**15th, 10 a.m.**	**30·419**	21st, 6 a.m.	29·291	·234
February	45·5	27th, 1 p.m. 29th, 1 p.m.	54·0	10th, 5 a.m.	34·0	29·622	2nd, 11 p.m.	30·181	18th, 8 p.m.	28·962	·262
March	43·5	5th, 1 p.m.	53·7	23rd, 4 a.m.	32·5	·424	19th, 11 p.m.	29·994	10th, 8 a.m.	·361	·231
April	47·9	4th, 2 p.m.	59·3	13th, 10 p.m.	33·7	·647	5th, 10 a.m.	30·330	19th, 2 a.m.	28·612	·282
May	50·8	21st, 1 p.m.	64·0	2nd, 5 a.m.	39·4	·930	4th, 9 a.m.	·257	24th, 6 a.m.	29·476	·270
June	57·0	26th, 4 p.m.	74·9	14th, 5 a.m.	47·0	·800	10th, 10 p.m.	·064	9th, 5 a.m.	·524	·361
July	62·9	**17th, 2 p.m.**	**80·0**	12th, 4 a.m. & 5 a.m.	50·6	·906	12th, 2 p.m.	·244	31st, 7 a.m.	·491	·441
August	61·4	13th, 2 p.m.	74·3	31st, 6 a.m.	51·0	·761	6th, 7 a.m.	·117	31st, 7 a.m.	29·115	·446
September	56·6	5th, 2 p.m.	65·5	15th, 5 a.m.	49·3	·605	20th, 10 a.m.	·147	30th, 5 p.m.	28·845	·397
October	54·3	6th, 1 p.m.	63·7	31st, Midnt.	41·4	·659	31st, Midnt.	·137	11th, 11 a.m.	·854	·354
November	*48·7	13th, 2 p.m.	58·2	10th, 0·10 a.m.	32·0	·612	1st, Midnt.	·211	12th, 5 p.m.	28·795	·283
December	48·1	2nd, 4 p.m.	57·9	25th, 7 a.m.	34·9	29·191	9th, 8 p.m.	30·038	**4th, 3 a.m.**	**†27·983**	·289
Annual	51·6	--	—	--	—	29·682	—	—	--	—	·321

* Mean for one day is approximate.

† Approximate reading.

Table I.—Mean Monthly Results, &c.—*continued.*

STONYHURST.

1876. MONTHS.	THERMOMETER.					BAROMETER.					VAPOUR TENSION.
	Means.	Extremes.				Means.	Extremes.				
		Maximum.		Minimum.			Maximum.		Minimum.		
		Day.	Ther.	Day.	Ther.		Day.	Bar.	Day.	Bar.	
	°	D. H.	°	D. H.	°	ins.	D. H.	ins.	D. H.	ins.	in.
January - -	38·5	31st, 1 p.m.	50·9	**9th, 0·13 a.m.**	**19·3**	29·830	**15th, 11 a.m.**	**30·268**	20th, 3 p.m.	29·248	·202
February - -	39·7	18th, 11 a.m. 21st, 5 p.m.	51·7	11th, 6 a.m. & 8 a.m.	21·9	327	2nd, 10 p.m.	29·751	19th, 2 a.m.	28·590	·208
March - -	39·1	3rd, 3 p.m.	54·0	20th, 5 a.m.	25·5	·099	19th, 11 p.m.	29·769	10th, 6 a.m.	·119	·193
April - -	45·4	8th, 2 p.m.	65·8	2nd, 6 a.m.	29·4	·437	5th, 10 a.m.	30·069	19th, 1 p.m.	28·498	·240
May - - -	48·8	6th, 3 p.m.	65·9	3rd, 5 a.m.	31·9	·770	8th, Midnt.	30·112	22nd, 5 p.m.	29·198	·249
June - -	56·6	20th, 3 p.m.	*80·0	11th, 4 a.m.	41·6	·578	1st, 6 a.m. & 11 a.m.	29·861	3rd, 6 p.m.	·122	·340
July - - -	60·8	**16th, 1 p.m.**	**84·0**	12th, 2 a.m.	45·9	·644	15th, 6 a.m. & 7 a.m.	30·062	28th, Noon	29·084	·407
August - -	59·2	13th, 4 p.m.	82·4	24th, 5 a.m.	40·6	·513	10th, 10 p.m.	29·968	31st, 9 a.m.	28·581	·389
September - -	53·5	21st, 3 p.m.	69·6	15th, 4 a.m.	42·2	·367	20th, Noon	·973	5th, 3 & 4 a.m.	·931	·336
October - -	51·1	4th, 1 p.m.	64·9	31st, 5 a.m.	32·2	·506	31st, Midnt.	·939	11th, 3 p.m.	·525	·310
November - -	42·1	15th, 1 p.m. 16th, 6 p.m.	55·3	10th, 7 a.m.	27·0	·454	1st, 9 a.m.	·985	27th, 3 p.m.	28·863	·234
December - -	42·1	28th, ?	†53·8	23rd, 7 a.m.	27·1	29·017	26th, 9 a.m.	29·773	**4th, 8 a.m.**	**27·980**	·236
Annual - -	48·1	-	—	—	—	29·462	—	—	—	—	·279

* Probable, but trace is very faint. † Corrected reading of Phillips' maximum thermometer, obtained from Weather Sheet.

KEW.

	°	D. H.	°	D. H.	°	ins.	D. H.	ins.	D. H.	ins.	in.
January - -	37·1	3rd, 10 a.m.	53·7	12th, 9 a.m.	21·6	30·247	**15th, 10 a.m.**	**30·641**	21st, 3 & 4 p.m.	29·574	·195
February - -	41·5	29th, 4 p.m.	58·1	**12th, 8 a.m.**	***21·5**	29·782	2nd, Midnt.	·344	19th, 1 a.m.	29·134	·219
March - -	41·6	31st, 1 p.m.	60·9	21st, 6 a.m.	27·7	·553	19th, 10 p.m.	·061	12th, Noon	28·431	·207
April - -	47·8	8th, ?	†70·4	13th, 7 p.m. 14th, 0·20 a.m.	32·2	‡29·832	5th, 10 a.m.	·482	19th, 9 a.m.	28·875	·255
May - - -	49·4	30th, 5 p.m.	69·1	5th, 5 a.m.	32·6	30·102	4th, 8 a.m.	·472	24th, 4 p.m.	29·639	·245
June - - -	59·2	21st, 2 p.m.	84·0	11th, 4 a.m.	40·2	29·957	1st, 8 a.m.	·242	9th, 6 a.m.	·678	·360
July - - -	65·8	15th, 4 p.m.	88·5	12th, 4 a.m.	47·0	30·047	12th, 8 & 9 a.m.	·417	28th, 6 p.m.	·570	·431
August - -	63·3	**13th, 2 p.m.**	**92·3**	26th, 2 a.m.	44·1	29·909	11th, 8 a.m.	·334	31st, 2 p.m.	·089	·405
September - -	56·0	22nd, 1 p.m.	70·9	21st, 5 a.m.	42·0	·764	20th, 9 a.m.	·366	30th, Midnt.	·225	·368
October - -	52·9	17th, 2 p.m.	69·1	31st, 9 p.m.	35·3	·900	25th, 10 a.m.	·314	11th, 4 p.m.	·177	·341
November - -	44·1	14th, 1 p.m.	62·9	10th, 10 p.m.	25·5	·845	4th, 10 p.m.	·349	12th, Midnt.	29·083	·251
December - -	44·5	2nd, Midnt.	55·8	23rd, 1 a.m.	27·7	29·454	10th, 10 a.m.	30·177	**4th, 11 a.m.**	**28·345**	·259
Annual - -	50·3	—	—	—	—	29·866	—	—	—	—	·295

* Trace rather faint. † Corrected reading of Phillips' maximum thermometer, obtained from Weather Sheet.
‡ Mean for one day is approximate.

FIVE-DAY MEANS of the DRY and WET BULB THERMOMETERS and BAROMETER, from the continuous RECORDS at the SEVEN BRITISH OBSERVATORIES, January to June 1876.

Five-Day Periods.	THERMOMETERS.														BAROMETER.							Five-Day Periods.
	Valencia. 12 ft.		Armagh. 4 ft.		Glasgow. 7 ft.		Aberdeen. 41 ft.		Falmouth. 11 ft.		Stonyhurst. 7 ft.		Kew. 10 ft.		Valencia. 23 ft.	Armagh. 207 ft.	Glasgow. 184 ft.	Aberdeen. 88 ft.	Falmouth. 211 ft.	Stonyhurst. 361 ft.	Kew. 34 ft.	
	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.								
	°	°	°	°	°	°	°	°	°	°	°	°	°	°	ins.	ins.	ins.	ins.	ins.	ins.	ins.	
Jan. 1–5	49·3	47·1	44·8	(43·1)	42·4	40·6	40·8	39·4	47·6	45·8	41·7	40·6	41·2	40·2	29·938	29·797	29·825	29·933	29·938	29·735	30·172	Jan. 1–5
,, 6–10	39·7	37·5	35·1	33·8	35·3	32·8	35·0	33·0	34·5	32·3	31·3	29·6	30·2	(28·6)	30·269	30·132	30·171	30·337	29·997	29·934	·212	,, 6–10
,, 11–15	40·0	37·8	33·5	32·4	34·8	32·8	34·0	32·3	36·4	34·1	33·4	31·6	31·9	*30·2	·437	30·217	30·180	30·235	30·157	30·008	·334	,, 11–15
,, 16–20	48·5	46·6	43·0	41·9	42·8	40·7	41·6	38·5	45·3	43·9	41·6	40·5	40·0	38·7	·069	29·769	29·671	29·677	·012	29·650	·173	,, 16–20
,, 21–25	46·0	43·7	41·3	39·7	40·3	38·0	38·6	36·3	43·0	40·3	38·1	36·2	39·2	37·6	30·092	·884	·861	29·904	·040	·810	·250	,, 21–25
,, 26–30	49·8	48·3	47·4	45·9	46·1	44·0	43·7	42·1	47·8	47·0	43·2	41·4	38·5	38·0	29·969	·836	·892	30·005	·025	·843	·317	,, 26–30
Feb. 31–4	47·2	44·5	42·9	41·5	42·1	39·9	41·2	39·2	46·0	44·0	42·8	40·6	42·3	40·0	30·088	·775	·704	29·750	30·001	·676	30·172	Feb. 31–4
,, 5–9	40·2	37·7	34·1	32·5	35·0	32·5	35·8	33·9	37·7	34·3	35·1	32·7	34·7	32·9	30·011	·874	·894	30·026	29·771	·618	29·877	,, 5–9
,, 10–14	45·1	43·0	33·8	32·4	31·7	29·7	32·8	31·5	41·5	39·8	30·7	29·3	30·9	29·7	29·556	·480	·572	29·719	·502	29·366	·770	,, 10–14
,, 15–19	49·0	46·7	43·5	42·2	41·2	39·0	38·8	37·1	49·9	48·8	44·6	43·0	48·6	46·5	·343	·069	·015	·088	·359	28·970	·528	,, 15–19
,, 20–24	48·0	45·5	42·1	40·6	38·8	36·3	36·6	34·7	48·5	46·8	42·0	40·2	45·4	42·8	·705	·432	·379	·451	·678	29·294	·807	,, 20–24
,, 25–1†	49·8	47·2	45·7	44·4	39·1	37·6	38·7	37·2	49·5	48·1	44·4	43·0	47·6	45·5	·505	·215	·221	·356	·507	·137	·646	,, 25–1†
Mar. 2–6	48·3	45·7	43·9	42·2	43·1	40·7	43·0	39·7	48·6	46·7	44·2	42·2	47·0	44·4	·672	29·250	29·106	29·081	·637	29·146	·715	Mar. 2–6
,, 7–11	43·1	40·0	37·4	36·0	37·9	35·6	36·8	34·7	43·4	41·0	39·0	36·7	41·9	38·7	·185	28·807	28·638	28·610	·091	28·612	·170	,, 7–11
,, 12–16	44·0	40·5	37·3	35·6	35·8	33·6	34·3	(32·3)	45·0	42·2	38·2	35·6	41·3	38·1	29·556	29·108	28·937	28·932	·355	28·884	·392	,, 12–16
,, 17–21	42·2	39·5	33·6	(31·8)	32·1	(28·9)	30·8	29·3	38·1	35·1	32·6	30·1	33·5	30·7	30·125	·853	29·780	29·823	·819	29·556	·913	,, 17–21
,, 22–26	42·6	39·3	39·2	36·9	39·4	37·0	38·5	37·0	40·5	37·2	37·5	34·6	37·9	35·0	29·686	·552	·557	·669	·486	·387	·721	,, 22–26
,, 27–31	42·9	40·4	39·8	38·2	38·9	37·1	39·1	38·0	44·8	43·4	42·0	39·9	47·0	44·2	29·357	·180	·205	·356	·148	·007	29·394	,, 27–31
Apr. 1–5	51·0	49·5	49·8	47·3	47·7	45·2	47·4	45·1	49·3	47·5	47·4	44·7	49·0	45·9	30·051	·845	·837	·906	·982	·749	30·149	April 1–5
,, 6–10	50·4	48·2	48·7	46·6	48·4	45·8	47·2	44·6	50·3	48·5	50·7	47·8	52·4	48·4	29·930	·708	·679	·765	·790	·540	29·985	,, 6–10
,, 11–15	42·0	38·5	37·6	34·5	37·5	(32·7)	35·7	33·2	40·9	(37·1)	37·4	(33·5)	38·5	35·4	30·087	·789	·726	·800	·783	·520	·825	,, 11–15
,, 16–20	47·6	45·5	44·4	42·0	43·9	41·0	42·5	41·3	47·0	45·1	45·0	42·2	46·8	44·0	29·233	·136	·202	·376	·128	·005	·395	,, 16–20
,, 21–25	50·3	47·7	45·4	42·9	44·2	41·5	41·2	38·8	50·2	48·4	46·6	44·6	51·1	47·3	·792	·598	·608	·757	·699	·445	·887	,, 21–25
,, 26–30	49·6	47·2	46·6	44·0	43·5	40·8	42·7	40·2	49·6	47·9	45·1	42·5	49·0	45·9	29·642	29·517	29·567	29·742	29·501	·361	(29·746)	,, 26–30
May 1–5	49·1	44·5	46·4	41·3	46·2	40·5	44·9	40·1	46·5	42·6	45·1	40·0	44·1	39·8	30·229	30·066	30·054	30·151	30·046	29·879	30·229	May 1–5
,, 6–10	52·0	46·7	50·0	44·6	50·6	44·9	46·0	43·4	49·6	44·9	48·3	43·2	47·9	42·6	·268	·172	·204	·372	30·031	30·003	·270	,, 6–10
,, 11–15	51·3	47·0	50·1	45·1	47·9	43·0	45·0	42·0	49·3	44·5	46·9	42·3	46·7	41·8	·183	·036	·048	·189	29·914	29·832	·119	,, 11–15
,, 16–20	52·9	48·1	48·8	44·9	49·1	43·8	46·6	43·0	51·6	47·2	48·9	44·4	49·4	44·2	30·268	30·118	30·117	30·247	·965	·894	30·184	,, 16–20
,, 21–25	52·2	48·9	50·7	47·9	50·6	46·7	47·4	45·1	52·7	48·9	49·7	46·7	51·5	47·6	29·891	29·602	29·564	29·680	·676	·404	29·801	,, 21–25
,, 26–30	53·5	51·0	53·7	51·1	53·3	50·0	55·5	51·0	54·1	50·8	53·1	50·4	55·4	51·4	30·203	·858	(·726)	·745	·941	·620	30·014	,, 26–30
June 31–4	53·8	50·3	52·6	49·3	51·7	48·0	52·3	47·6	55·5	51·1	53·5	49·3	55·5	50·7	29·988	·718	(·674)	·733	·849	·579	30·003	June 31–4
,, 5–9	53·0	49·0	51·1	47·3	50·6	46·5	51·6	46·6	53·5	51·2	52·7	48·9	55·9	52·2	29·926	·639	·573	·652	·740	·476	29·887	,, 5–9
,, 10–14	54·1	51·0	53·7	50·3	53·6	48·7	53·2	48·7	56·3	52·3	55·1	50·9	57·7	52·2	30·097	·840	·809	·902	·927	·682	30·040	,, 10–14
,, 15–19	54·1	51·5	53·6	50·6	53·5	49·7	53·9	49·7	54·6	52·4	54·7	51·2	57·3	(53·4)	29·807	·540	·525	29·632	·737	·459	29·920	,, 15–19
,, 20–24	57·2	54·0	59·2	55·4	61·4	56·6	55·2	52·9	58·2	54·9	61·7	57·0	64·8	59·5	29·836	·729	·798	30·037	·723	·601	29·918	,, 20–24
,, 25–29	59·5	55·7	59·2	54·9	61·2	55·1	58·6	53·3	62·8	57·1	61·2	55·9	63·3	57·2	30·156	29·953	29·907	30·021	29·848	29·707	30·006	,, 25–29

NOTE.—Means which are enclosed in brackets are a little doubtful, one of the five daily means being approximate.

* Doubtful, two of the five daily means are approximate only.

† Being leap year the period, Feb. 25—March 1, comprises six days.

TABLE II.—PART 2.

FIVE-DAY MEANS of the DRY and WET BULB THERMOMETERS and BAROMETER, from the continuous RECORDS at the SEVEN BRITISH OBSERVATORIES, July to December 1876.

Five-Day Periods.	THERMOMETERS.														BAROMETER.							Five-Day Periods.
	Valencia. 12 ft.		Armagh. 4 ft.		Glasgow. 7 ft.		Aberdeen. 41 ft.		Falmouth. 11 ft.		Stonyhurst. 7 ft.		Kew. 10 ft.		Valencia. 23 ft.	Armagh. 207 ft.	Glasgow. 184 ft.	Aberdeen. 88 ft.	Falmouth. 211 ft.	Stonyhurst. 361 ft.	Kew. 34 ft.	
	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	
June 30–4	57°·2	55°·2	58°·5	55°·1	56°·4	52°·8	57°·1	(52°·1)	61°·4	59°·2	58°·6	55°·4	64°·4	59°·7	29·965	29·707	29·667	(29·729)	29·863	29·575	29·988	June 30–4
July 5–9	57·6	54·9	58·9	55·1	57·0	53·6	57·5	52·9	60·4	58·8	60·7	57·7	64·6	60·8	29·817	29·545	·516	29·599	29·714	·422	29·882	July 5–9
,, 10–14	60·0	55·3	59·4	55·7	57·4	54·0	60·4	54·8	60·3	54·9	59·1	54·6	63·6	56·9	30·329	30·062	29·984	30·022	30·141	·879	30·272	,, 10–14
,, 15–19	64·4	60·1	63·3	58·1	62·3	57·2	61·9	56·8	67·8	62·2	65·7	60·5	71·1	62·7	·296	30·095	30·026	·097	30·068	·876	·225	,, 15–19
,, 20–24	61·7	57·6	60·7	56·5	59·0	54·9	55·7	52·8	65·2	60·6	63·1	58·5	66·9	60·9	30·157	29·930	29·887	30·001	29·894	·708	30·034	,, 20–24
,, 25–29	58·4	55·9	56·9	53·8	55·0	51·0	55·7	50·9	62·6	58·2	57·8	54·0	64·3	57·8	29·984	·674	·600	29·657	·834	·507	29·942	,, 25–29
Aug. 30–3	57·4	54·5	55·1	52·6	54·2	51·4	55·2	51·9	60·7	56·6	56·6	53·1	61·7	55·5	29·709	·415	·373	·460	·680	·330	29·856	Aug. 30–3
,, 4–8	59·9	57·6	58·6	55·7	56·8	54·2	57·6	53·4	61·6	58·9	59·3	56·5	64·1	59·2	30·081	·797	·740	·784	·977	·679	30·119	,, 4–8
,, 9–13	61·3	56·9	60·2	56·1	59·9	55·7	59·7	54·9	63·6	59·8	62·7	57·3	67·6	59·9	30·085	·914	·911	·997	·925	·781	30·123	,, 9–13
,, 14–18	64·4	61·6	64·4	60·5	64·1	59·6	59·0	56·9	64·1	62·2	65·9	61·4	71·1	64·6	29·779	·720	·793	·994	·695	·593	29·911	,, 14–18
,, 19–23	61·3	57·8	58·6	55·4	59·5	54·5	55·5	52·5	62·7	60·1	61·3	56·8	63·4	59·6	29·910	·725	·689	·810	·641	·476	·807	,, 19–23
,, 24–28	57·6	54·0	54·1	51·3	53·6	49·6	50·8	47·2	58·0	54·2	53·1	50·2	56·1	51·2	30·030	·686	·584	·648	·789	·451	·858	,, 24–28
Sept. 29–2	56·6	53·2	52·8	50·8	53·0	49·6	51·8	48·8	57·2	54·1	53·2	50·6	56·2	52·6	29·760	·398	·317	·428	·541	·138	·580	Sept. 29–2
,, 3–7	56·8	54·4	54·5	52·3	52·9	50·2	51·6	48·9	59·3	57·1	55·3	52·5	60·1	56·5	29·584	·317	·286	·399	·509	·207	·679	,, 3–7
,, 8–12	54·0	49·7	51·0	48·5	49·8	47·0	49·6	47·3	54·1	50·4	51·6	48·3	52·5	49·1	30·042	·666	·535	·577	·723	·366	·760	,, 8–12
,, 13–17	54·8	51·6	50·3	48·4	51·7	48·9	51·5	50·6	54·3	51·7	52·1	49·4	52·6	50·4	29·730	·528	·514	·638	·562	·349	29·723	,, 13–17
,, 18–22	58·5	56·9	55·4	53·7	53·6	50·5	51·3	48·9	57·0	55·9	56·3	53·1	56·0	52·9	·932	·816	·848	·984	·905	·710	30·122	,, 18–22
,, 23–27	56·9	55·1	*54·5	*53·2	54·6	52·9	52·7	52·0	58·4	57·1	54·7	53·1	59·2	56·7	·644	·496	·509	·670	·542	·316	29·731	,, 23–27
Oct. 28–2	53·8	51·1	49·5	47·1	47·8	44·3	45·6	43·4	56·6	55·0	48·5	*45·9	54·0	51·4	·634	·580	·643	·788	·387	·383	·668	Oct. 28–2
,, 3–7	58·6	56·6	57·7	55·2	55·4	53·0	53·1	51·9	59·3	57·6	57·3	55·2	59·8	57·9	·510	·433	·518	·680	·583	·424	·861	,, 3–7
,, 8–12	54·6	52·1	52·6	50·5	52·7	50·3	52·1	49·8	57·1	55·2	53·6	51·2	58·7	56·2	·288	·077	·081	*·189	·318	·056	·564	,, 8–12
,, 13–17	53·6	50·7	51·5	49·3	(50·6)	(48·4)	49·8	48·3	54·9	52·7	52·2	49·6	53·5	52·0	29·405	·265	·324	29·482	·440	·247	·710	,, 13–17
,, 18–22	52·2	49·9	50·5	49·3	50·9	49·1	50·7	48·8	51·9	49·6	52·6	49·7	52·5	49·9	30·008	·843	29·865	30·055	·689	·632	29·902	,, 18–22
,, 23–27	53·5	51·3	50·4	48·3	47·6	45·0	47·4	44·9	51·8	48·6	45·7	43·2	46·5	44·8	·049	29·961	30·004	·139	29·951	·841	30·196	,, 23–27
Nov. 28–1	49·4	47·1	45·4	43·9	44·6	41·6	43·2	40·0	47·5	43·7	44·2	40·9	44·1	41·1	·334	30·114	·013	·038	30·082	·865	·223	Nov. 28–1
,, 2–6	53·8	51·7	48·2	47·2	47·2	45·4	46·0	43·7	50·6	48·2	47·3	45·8	46·1	44·4	30·255	30·060	30·008	·096	30·109	·855	·247	,, 2–6
,, 7–11	46·9	44·5	38·6	36·4	32·3	(30·9)	34·5	32·4	42·9	39·3	34·1	31·7	35·1	(33·2)	29·871	29·852	29·941	30·111	29·765	·707	30·033	,, 7–11
,, 12–16	51·3	49·5	47·0	45·6	44·5	42·7	45·1	42·7	(53·7)	(52·9)	45·5	44·1	49·6	48·3	·186	·136	·284	29·549	·087	·072	29·419	,, 12–16
,, 17–21	(50·4)	(48·4)	46·9	45·4	46·5	44·6	46·3	45·4	51·1	49·1	46·7	45·2	48·8	47·0	·817	·580	·549	·696	·715	·427	·863	,, 17–21
,, 22–26	49·8	48·4	45·1	43·7	39·2	37·5	42·6	40·3	49·2	46·8	39·9	38·3	43·0	41·1	(·501)	·460	·568	·729	·541	·429	·870	,, 22–26
Dec. 27–1	47·6	45·5	39·4	38·6	34·1	*32·6	38·2	36·7	48·6	46·4	40·9	40·0	44·6	43·0	29·344	29·183	29·206	29·336	29·214	29·020	29·447	Dec. 27–1
,, 2–6	48·8	46·5	46·2	45·3	45·4	43·9	44·8	43·5	51·5	49·4	47·0	45·6	50·8	48·6	28·697	28·509	28·577	28·799	28·657	28·426	28·934	,, 2–6
,, 7–11	47·2	45·5	42·3	41·1	44·8	43·3	41·1	39·8	48·8	46·4	43·0	41·7	44·8	43·1	29·767	29·559	29·516	29·600	29·639	29·419	29·809	,, 7–11
,, 12–16	47·7	45·3	43·4	42·1	42·8	40·7	41·9	40·0	48·6	46·7	42·3	40·6	42·2	40·8	·473	29·375	·456	·651	29·469	29·351	·792	,, 12–16
,, 27–21	44·5	42·7	41·4	40·2	37·9	(36·5)	37·9	(36·2)	45·1	43·4	40·3	38·9	42·9	41·7	·017	28·920	·037	·319	28·822	28·731	·093	,, 17–21
,, 22–26	42·8	40·0	35·4	34·1	33·2	31·7	35·6	(34·0)	40·9	38·8	32·8	(31·5)	34·2	33·2	·466	29·287	·380	·594	29·339	29·215	·566	,, 22–26
,, 27–31	49·7	47·8	45·9	44·7	41·7	40·7	41·0	39·9	52·9	51·5	46·4	44·8	51·0	49·1	29·165	28·999	29·036	29·166	29·266	28·984	29·550	,, 27–31

NOTE,—Means which are enclosed in brackets are a little doubtful, one of the five daily means being approximate.
* Doubtful, two of the five daily means are approximate only.

APPENDIX I. A.

TABLE I.—MEAN MONTHLY RESULTS from the continuous RECORDS at the SEVEN BRITISH OBSERVATORIES for the Year 1876. In millimetres and degrees centigrade.

VALENCIA.

1876. Months.	Thermometer.					Barometer.					Vapour Tension.
	Means.	Extremes.				Means.	Extremes.				
		Maximum.		Minimum.			Maximum.		Minimum.		
		Day.	Ther.	Day.	Ther.		Day.	Bar.	Day.	Bar.	
	° C.	D. H.	° C.	D. H.	° C.	mm.	D. H.	mm.	D. H.	mm.	mm.
January	7·61	3rd, 5 a.m.	12·78	22nd, 1 a.m.	−0·56	765·11	**15th, 10 a.m.**	**777·93**	2nd, 8 a.m.	750·69	6·65
February	8·06	17th, 1 p.m.	12·17	7th, 2 a.m.	0·22	54·19	4th, Noon	69·74	18th, 6 a.m.	36·11	6·63
March	6·61	2nd, 8 p.m.	12·22	**9th, 4 a.m.**	**−0·61**	51·67	19th, 2 a.m.	71·89	**10th, 2 a.m.**	**20·26**	5·71
April	9·17	7th, 1 p.m.	15·28	11th, 11 p.m.	0·72	56·63	5th, 1 p.m. & 9 p.m.	72·96	18th, 5 a.m.	33·01	7·19
May	11·06	7th, 4 p.m.	18·94	2nd, 5 a.m.	3·44	66·43	4th, 1 a.m.	72·45	24th, 4 a.m.	54·04	7·21
June	13·00	25th, 5 p.m.	23·67	1st, 5 a.m.	7·11	60·97	10th, 10 a.m.	71·03	21st, 5 a.m.	49·82	8·83
July	15·44	**15th, 4 p.m.**	**26·39**	27th, 5 a.m.	7·89	63·81	12th, 10 p.m.	72·53	7th, 6 p.m.	49·59	10·31
August	15·67	12th, 4 p.m.	25·83	25th, 6 a.m.	8·89	59·93	10th, 10 a.m.	70·45	2nd, Midnt.	37·60	10·59
September	13·28	23rd, 1 p.m.	17·89	29th, 5 a.m.	8·33	56·12	19th, 8 p.m.	66·53	24th, 6 a.m.	42·07	9·42
October	12·22	20th, 3 p.m.	17·00	31st, 11 p.m.	3·50	55·56	31st, Midnt.	72·25	11th, 10 a.m.	28·46	8·89
November	*9·83	14th, 2 p.m.	15·17	9th, 10 p.m.	1·83	*54·57	1st, 2 a.m.	†72·18	14th, 7 p.m.	32·70	7·77
December	8·33	11th, 10 p.m.	12·67	25th, 9 a.m.	1·33	743·09	9th, 11 a.m.	766·50	3rd, Midnt. 4th, 1 a.m.	721·80	6·88
Annual	10·86	—	—	—	—	757·34	—	—	—	—	8·01

* Mean for one day is approximate.

† Trace rather faint.

ARMAGH.

	° C.	D. H.	° C.	D. H.	° C.	mm.	D. H.	mm.	D. H.	mm.	mm.
January	5·11	3rd, 3 p.m.	11·67	**14th, 9 a.m.**	**−4·56**	760·31	**14th, 10 a.m.**	**772·83**	20th, 1 a.m.	744·91	5·81
February	4·44	22nd, 2 p.m. 28th, 1 p.m.	11·06	12th, 6 a.m.	−4·39	48·40	4th, 7 p.m.	62·14	18th, Noon	28·46	5·53
March	3·72	3rd, Noon	12·83	18th, 11 p.m.	−2·22	43·88	19th, 7 p.m. & 8 p.m.	63·86	9th, 3 p.m. 10th, 4 a.m.	19·39	5·13
April	7·44	4th, 5 p.m.	15·50	13th, 6 a.m.	−2·00	51·80	6th, 10 a.m.	68·03	19th, 5 p.m.	30·16	6·27
May	10·00	6th, 3 p.m.	17·17	2nd, 5 a.m.	0·39	61·35	9th, 9 a.m.	68·92	22nd, Noon	46·21	6·68
June	12·83	26th, 2 p.m.	24·06	10th, 4 a.m.	5·56	55·07	10th, 9 a.m.	64·40	4th, Midnt.	41·39	8·58
July	15·22	**16th, 1 p.m.**	**29·06**	27th, 5 a.m.	7·33	57·26	15th, 1 a.m.	67·96	28th, 7 a.m.	43·17	9·88
August	14·50	14th, 2 p.m.	24·83	25th, 1 a.m.	6·00	53·96	10th, Noon & 10 p.m.	64·47	3rd, 5 a.m.	31·23	9·88
September	*11·56	4th, 1 p.m.	18·44	15th, 5 a.m.	4·17	50·66	20th, 10 a.m.	64·12	5th, 3 a.m.	36·77	8·76
October	10·83	6th, 3 p.m.	17·78	31st, 11 p.m.	1·94	52·03	31st, Midnt.	67·47	11th, 6 p.m.	22·65	8·43
November	6·61	15th, 2 p.m.	13·17	30th, 5 a.m.	−2·78	51·50	1st, 9 a.m.	67·67	14th, Midnt.	34·05	6·50
December	5·89	27th, 6 p.m.	10·67	15th, 2 a.m.	−1·22	739·21	9th, 4 p.m.	759·80	**3rd, Noon**	**717·26**	6·27
Annual	9·01	—	—	—	—	752·12	—	—	—	—	7·31

* Means for two days are approximate.

Table I.—Mean Monthly Results, &c.—*continued.*

GLASGOW.

1876. Months.	Thermometer.					Barometer.					Vapour Tension.
	Means.	Extremes.				Means.	Extremes.				
		Maximum.		Minimum.			Maximum.		Minimum.		
		Day.	Ther.	Day.	Ther.		Day.	Bar.	Day.	Bar.	
	° C.	D. H.	° C.	D. H.	° C.	mm.	D. H.	mm.	D. H.	mm.	mm.
January - -	4·78	4th, Noon 19th, 3 p.m.	10·00	**14th, 7 a.m.**	**-5·44**	760·18	**7th, 6 a.m.**	**772·68**	20th, 4 a.m.	741·61	5·28
February - -	3·00	1st, 5 a.m.	9·72	11th, 9 a.m.	-5·00	48·15	6th, 10 p.m.	62·09	18th, 4 p.m.	25·89	4·65
March - -	3·39	3rd, 3 p.m.	11·67	20th, 5 a.m.	-3·89	41·70	19th, 10 p.m.	62·69	**9th, Midnt.**	**13·35**	4·67
April - -	6·78	8th, 1 p.m.	16·06	13th, 6 a.m.	-3·17	51·91	6th, 10 a.m.	67·60	19th, 4 p.m.	30·03	5·73
May - -	9·83	6th, 4 p.m.	17·67	2nd, 5 a.m.	0·44	*60·75	9th, 7 a.m.	70·26	22nd, 5 p.m.	45·20	6·24
June - -	13·06	**20th, 3 p.m.**	**27·39**	1st, 4 a.m.	5·00	54·52	10th, 9 a.m.	62·64	5th, 3 a.m.	38·11	8·15
July - -	14·33	16th, 3 p.m.	27·11	10th, 5 a.m.	6·11	55·82	15th, 7 a.m.	67·93	28th, 11 a.m.	41·03	9·32
August - -	14·28	**14th, 4 p.m.**	**27·39**	25th, 4 a.m.	3·89	53·18	10th, 10 p.m.	63·91	3rd, 9 a.m.	31·43	9·34
September -	11·17	21st, 3 p.m. 22nd, 4 p.m.	19·00	30th, 6 a.m.	3·72	50·08	20th, 11 a.m.	65·54	5th, 5 a.m.	33·46	8·05
October - -	†10·28	4th, 2 p.m.	16·94	31st, Midnt.	1·78	52·72	31st, 10 p.m. & Midnt.	65·85	11th, 4 p.m.	23·43	7·67
November -	4·72	5th, 1 p.m.	13·06	10th, 6 a.m.	-4·22	52·51	1st, 10 a.m.	66·08	15th, 3 a.m.	37·99	5·51
December -	5·00	3rd, 5 p.m.	10·50	24th, 6 a.m.	-1·67	740·78	26th, 5 a.m.	760·97	4th, 4 p.m.	716·30	5·71
Annual - -	8·39	—	—	—	—	751·86	—	—	—	—	6·69

* Means for two days are approximate.

† Mean for one day is approximate.

ABERDEEN.

	° C.	D. H.	° C.	D. H.	° C.	mm.	D. H.	mm.	D. H.	mm.	mm.
January - -	4·00	31st, 3 p.m.	10·44	**9th, 11 a.m.**	**-5·00**	762·29	**7th, 8 a.m.**	**777·12**	20th, 5 a.m.	739·92	5·11
February - -	2·72	22nd, 2 p.m.	10·00	10th, 7 a.m.	-3·56	50·76	6th, 11 p.m. & Midnt.	65·47	18th, 6 p.m.	28·91	4·75
March - -	2·94	3rd, 5 p.m.	10·89	18th, 2 p.m.	-4·44	42·78	21st, Midnt.	64·07	**9th, Midnt. 10th, 1 a.m.**	**09·36**	4·67
April - -	6·00	8th, 1 p.m.	15·72	13th, 5 a.m.	-3·00	54·97	6th, 10 a.m.	70·31	20th, 5 a.m.	33·64	5·76
May - -	8·72	29th, 3 p.m.	19·33	1st, 4 a.m.	0·89	63·51	9th, 10 a.m.	74·41	23rd, 4 a.m.	47·71	6·35
June - -	12·33	25th, 2 p.m.	24·83	4th, 3 a.m.	4·06	57·54	10th, 11 a.m. & Noon	65·37	5th, 6 a.m.	39·68	7·77
July - -	14·50	**16th, 4 p.m.**	**29·39**	3rd, 4 a.m.	6·44	*57·59	15th, 10 a.m.	70·75	28th, 4 p.m.	41·97	8·99
August - -	13·28	11th, 3 p.m.	23·06	28th, 3 a.m.	4·11	55·82	12th, 8 a.m.	64·98	3rd, 2 p.m.	33·89	8·99
September - -	10·44	5th, 2 p.m.	17·44	3rd, 4 a.m.	3·17	53·02	20th, 11 a.m.	69·04	5th, 9 & 10 a.m.	35·85	8·20
October - -	9·61	7th, 2 p.m. 8th, 1 p.m.	15·56	30th, Midnt.	†1·00	‡56·14	21st, 11 a.m. 22nd, 8 p.m. & 10 p.m.	69·81	11th, 5 p.m.	§26·61	7·59
November -	5·56	3rd, 2 p.m.	13·00	10th, 7 p.m.	-4·44	56·37	4th, 11 a.m.	68·82	28th, 6 & 7 a.m.	41·56	5·76
December -	4·72	4th, 6 p.m.	9·00	21st, 5 a.m. 24th, 7 p.m.	-0·56	745·63	25th, 11 p.m.	764·98	6th, 6 a.m.	720·31	5·61
Annual -	7·90	—	—	—	—	754·70	—	—	—	—	6·63

* Mean for one day is approximate.

‡ Means for two days are approximate.

† Probable minimum; trace lost for 6 hours.

§ Lowest reading recorded, but trace lost for 13 hours.

Table I.—Mean Monthly Results, &c.—*continued*.

FALMOUTH.

1876. Months.	Thermometer.					Barometer.					Vapour Tension.
	Means.	Extremes.				Means.	Extremes.				
		Maximum.		Minimum.			Maximum.		Minimum.		
		Day.	Ther.	Day.	Ther.		Day.	Bar.	Day.	Bar.	
	° C.	D. H.	° C.	D. H.	° C.	mm.	D. H.	mm.	D. H.	mm.	mm.
January - -	5·89	2nd, 3 p.m.	11·78	**8th, 9 a.m.**	**-1·67**	762·75	**15th, 10 a.m.**	**772·63**	21st, 6 a.m.	743·98	5·94
February - -	7·50	27th, 1 p.m. 29th, 1 p.m.	12·22	10th, 5 a.m.	1·11	52·38	2nd, 11 p.m.	66·59	18th, 8 p.m.	35·62	6·65
March - -	6·39	5th, 1 p.m.	12·06	23rd, 4 a.m.	0·28	47·35	19th, 11 p.m.	61·83	10th, 8 a.m.	20·36	5·87
April - -	8·83	4th, 2 p.m.	15·17	13th, 10 p.m.	0·94	53·02	5th, 10 a.m.	70·37	19th, 2 a.m.	26·73	7·16
May - -	10·44	21st, 1 p.m.	17·78	2nd, 5 a.m.	4·11	60·21	4th, 9 a.m.	68·52	24th, 6 a.m.	48·67	6·85
June - -	13·89	26th, 4 p.m.	23·83	14th, 5 a.m.	8·33	56·91	10th, 10 p.m.	63·61	9th, 5 a.m.	49·89	9·17
July - -	17·17	**17th, 2 p.m.**	**26·67**	12th, 4 & 5 a.m.	10·33	59·60	12th, 2 p.m.	68·18	31st, 7 a.m.	49·06	11·20
August - -	16·33	13th, 2 p.m.	23·50	31st, 6 a.m.	10·56	55·92	6th, 7 a.m.	64·96	31st, 7 a.m.	39·51	11·32
September -	13·67	5th, 2 p.m.	18·61	15th, 5 a.m.	9·61	51·96	20th, 10 a.m.	65·72	30th, 5 p.m.	32·65	10·08
October - -	12·39	6th, 1 p.m.	17·61	31st, Midnt.	5·22	53·33	31st, Midnt.	65·47	11th, 11 a.m.	32·88	8·99
November -	*9·28	13th, 2 p.m.	14·56	10th, 0·10 a.m.	0·00	52·13	1st, Midnt.	67·35	12th, 5 p.m.	31·38	7·19
December -	8·94	2nd, 4 p.m.	14·39	25th, 7 a.m.	1·61	741·44	9th, 8 p.m.	762·95	**4th, 3 a.m.**	**†710·76**	7·34
Annual - -	10·89	—	—	—	—	753·92	—	—	—	—	8·15

* Mean for one day is approximate. † Approximate reading.

STONYHURST.

1876. Months.	Thermometer.					Barometer.					Vapour Tension.
	Means.	Maximum Day.	Maximum Ther.	Minimum Day.	Minimum Ther.	Means.	Maximum Day.	Maximum Bar.	Minimum Day.	Minimum Bar.	
	° C.	D. H.	° C.	D. H.	° C.	mm.	D. H.	mm.	D. H.	mm.	mm.
January - -	3·61	31st, 1 p.m.	10·50	**9th, 0.13 a.m.**	**-7·06**	757·67	**15th, 11 a.m.**	**768·79**	20th, 3 p.m.	742·88	5·13
February - -	4·28	18th, 11 a.m. 21st, 5 p.m.	10·94	11th, 6 a.m. & 8 a.m.	-5·61	44·89	2nd, 10 p.m.	55·67	19th, 2 a.m.	26·17	5·28
March - -	3·94	3rd, 3 p.m.	12·22	20th, 5 a.m.	-3·61	39·10	19th, 11 p.m.	56·12	10th, 6 a.m.	14·21	4·90
April - -	7·44	8th, 2 p.m.	18·78	2nd, 6 a.m.	-1·44	47·69	5th, 10 a.m.	63·74	19th, 1 p.m.	23·83	6·09
May - -	9·33	6th, 3 p.m.	18·83	3rd, 5 a.m.	-0·06	56·14	8th, Midnt.	64·83	22nd, 5 p.m.	41·61	6·32
June - -	13·67	20th, 3 p.m.	*26·67	11th, 4 a.m.	5·33	51·26	1st, 6 and 11 a.m.	58·46	3rd, 6 p.m.	39·68	8·63
July - -	16·00	**16th, 1 p.m.**	**28·89**	12th, 2 a.m.	7·72	52·94	15th 6 and 7 a.m.	63·56	28th, Noon	38·72	10·34
August - -	15·11	13th, 4 p.m.	28·00	24th, 5 a.m.	4·78	49·62	10th, 10 p.m.	61·17	31st, 9 a.m.	25·95	9·88
September -	11·94	21st, 3 p.m.	20·89	15th, 4 a.m.	5·67	45·91	20th, Noon	61·30	5th, 3 & 4 a.m.	34·84	8·53
October - -	10·61	4th, 1 p.m.	18·28	31st, 5 a.m.	0·11	49·44	31st, Midnt.	60·44	11th, 3 p.m.	24·52	7·87
November -	5·61	15th, 1 p.m. 16th, 6 p.m.	12·94	10th, 7 a.m.	-2·78	48·12	1st, 9 a.m.	61·61	27th, 3 p.m.	33·11	5·94
December -	5·61	28th, ?	†12·11	23rd, 7 a.m.	-2·72	737·02	26th, 9 a.m.	756·22	**4th, 8 a.m.**	**710·68**	5·99
Annual - -	8·93	—	—	—	—	748·32	—	—	—	—	7·08

*** Probable, but trace is very faint.** † Corrected reading of Phillips' maximum thermometer, obtained from Weather Sheet.

Table I.—Mean Monthly Results, &c.—*continued.*

KEW.

1876. MONTHS.	THERMOMETER.					BAROMETER.					VAPOUR TENSION.
	Means.	Extremes.				Means.	Extremes.				
		Maximum.		Minimum.			Maximum.		Minimum.		
		Day.	Ther.	Day.	Ther.		Day.	Bar.	Day.	Bar.	
	° C.	D. H.	° C.	D. H.	° C.	mm.	D. H.	mm.	D. H.	mm.	mm.
January - -	2·83	3rd, 10 a.m.	12·06	12th, 9 a.m.	−5·78	768·26	**15th, 10 a.m.**	**778·27**	21st, 3 p.m. & 4 p.m.	751·16	4·95
February - -	5·28	29th, 4 p.m.	14·50	**12th, 8 a.m.**	* **−5·83**	56·45	2nd, Midnt.	70·72	19th, 1 a.m.	39·99	5·56
March - -	5·33	31st, 1 p.m.	16·06	21st, 6 a.m.	−2·39	50·64	19th, 10 p.m.	63·54	12th, Noon	22·14	5·26
April - -	8·78	8th, ?	†21·33	13th, 7 p.m. 14th, 0·20 a.m.	0·11	‡57·72	5th, 10 a.m.	74·23	19th, 9 a.m.	33·41	6·48
May - -	9·67	30th, 5 p.m.	20·61	5th, 5 a.m.	0·33	64·58	4th, 8 a.m.	73·97	24th, 4 p.m.	52·82	6·22
June - -	15·11	21st, 2 p.m.	28·89	11th, 4 a.m.	4·56	60·90	1st, 8 a.m.	68·13	9th, 6 a.m.	53·80	9·14
July - -	18·78	15th, 4 p.m.	31·39	12th, 4 a.m.	8·33	63·18	12th, 8 a.m. & 9 a.m.	72·58	28th, 6 p.m.	51·06	10·95
August - -	17·39	**13th, 2 p.m.**	**33·50**	26th, 2 a.m.	6·72	59·68	11th, 8 a.m.	70·47	31st, 2 p.m.	38·85	10·29
September -	13·33	22nd, 1 p.m.	21·61	21st, 5 a.m.	5·56	55·99	20th, 9 a.m.	71·28	30th, Midnt.	42·30	9·34
October - -	11·61	17th, 2 p.m.	20·61	31st, 9 p.m.	1·83	59·45	25th, 10 a.m.	69·96	11th, 4 p.m.	41·08	8·66
November -	6·72	14th, 1 p.m.	17·17	10th, 10 p.m.	−3·61	58·05	4th, 10 p.m.	70·85	12th, Midnt.	38·70	6·38
December -	6·94	2nd, Midnt.	13·22	23rd, 1 a.m.	−2·39	748·12	10th, 10 a.m.	766·48	**4th, 11 a.m.**	**719·95**	6·58
Annual - -	10·15	—	—	—	—	758·59	—	—	—	—	7·48

* Trace rather faint.

† Corrected reading of Phillips' maximum thermometer, obtained from Weather Sheet.

‡ Mean for one day is approximate.

TABLE II.—Part 1.

FIVE-DAY MEANS of the DRY and WET BULB THERMOMETERS and BAROMETER, from the continuous Records at the SEVEN BRITISH OBSERVATORIES, January to June 1876.

Five-Day Periods.	THERMOMETERS.														BAROMETER.							Five-Day Periods.
	Valencia. 3·63 m.		Armagh. 1·22 m.		Glasgow. 2·13 m.		Aberdeen. 12·50 m.		Falmouth. 3·35 m.		Stonyhurst. 2·13 m.		Kew. 3·05 m.		Valencia. 7·01 m.	Armagh. 63·09 m.	Glasgow. 56·08 m.	Aberdeen. 26·82 m.	Falmouth. 64·31 m.	Stonyhurst. 110·03 m.	Kew. 10·36 m.	
	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.	Dry.	Wet.								
	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	
Jan. 1–5	9·61	8·39	7·11	(6·17)	5·78	4·78	4·89	4·11	8·67	7·67	5·39	4·78	5·11	4·56	760·41	756·83	757·54	760·29	760·41	755·26	766·35	Jan. 1–5
,, 6–10	4·28	3·06	1·72	1·00	1·83	0·44	1·67	0·56	1·39	0·17	−0·39	−1·33	−1·00	(−1·89)	68·82	65·34	66·33	70·55	61·91	60·31	67·37	,, 6–10
,, 11–15	4·44	3·22	0·83	0·22	1·56	0·44	1·11	0·17	2·44	1·17	0·78	−0·22	−0·06	*−1·00	73·09	67·50	66·56	67·96	65·98	62·19	70·47	,, 11–15
,, 16–20	9·17	8·11	6·11	5·50	6·00	4·83	5·33	3·61	7·39	6·61	5·33	4·72	4·44	3·72	63·74	56·12	53·63	53·78	62·29	53·10	66·38	,, 16–20
,, 21–25	7·78	6·50	5·17	4·28	4·61	3·33	3·67	2·39	6·11	4·61	3·39	2·33	4·00	3·11	64·32	59·04	58·46	59·55	63·00	57·16	68·34	,, 21–25
,, 26–30	9·89	9·06	8·56	7·72	7·83	6·67	6·50	5·61	8·78	8·33	6·22	5·22	3·61	3·33	61·20	57·82	59·24	62·12	62·62	58·00	70·04	,, 26–30
Feb. 31–4	8·44	6·94	6·06	5·28	5·61	4·39	5·11	4·00	7·78	6·67	6·00	4·78	5·72	4·44	64·22	56·27	54·47	55·64	62·02	53·75	66·35	Feb. 31–4
,, 5–9	4·56	3·17	1·17	0·28	1·67	0·28	2·11	1·06	3·17	1·28	1·72	0·39	1·50	0·50	62·27	58·78	59·29	62·64	56·17	52·28	58·86	,, 5–9
,, 10–14	7·28	6·11	1·00	0·22	0·17	−1·28	0·44	−0·28	5·28	4·33	−0·72	−1·50	−0·61	−1·28	50·71	48·78	51·11	54·85	49·34	45·88	56·14	,, 10–14
,, 15–19	9·44	8·17	6·39	5·67	5·11	3·89	3·78	2·83	9·94	9·33	7·00	6·11	9·22	8·06	45·30	38·34	36·97	38·82	45·71	35·82	49·99	,, 15–19
,, 20–24	8·89	7·50	5·61	4·78	3·78	2·39	2·56	1·50	9·17	8·22	5·56	4·56	7·44	6·00	54·50	47·56	46·21	48·05	53·80	44·05	57·09	,, 20–24
,, 25–1†	9·89	8·44	7·61	6·89	3·94	3·11	3·72	2·89	9·72	8·94	6·89	6·11	8·67	7·50	49·42	42·05	42·20	45·63	49·47	40·07	52·99	,, 25–1†
Mar. 2–6	9·06	7·61	6·61	5·67	6·17	4·83	6·11	4·28	9·22	8·17	6·78	5·67	8·33	6·89	53·65	42·94	39·28	38·65	52·77	40·29	54·75	Mar. 2–6
,, 7–11	6·17	4·44	3·00	2·22	3·28	2·00	2·67	1·50	6·33	5·00	3·89	2·61	5·50	3·72	41·29	31·69	27·39	26·68	38·90	26·73	40·90	,, 7–11
,, 12–16	6·67	4·72	2·94	2·00	2·11	0·89	1·28	(·1)	7·22	5·67	3·44	2·00	5·17	3·39	50·71	39·33	34·99	34·86	45·61	33·64	46·54	,, 12–16
,, 17–21	5·67	4·17	0·89	(−0·11)	0·06	(−1·72)	−0·67	−1·50	3·39	1·72	0·33	−1·06	0·83	−0·72	65·16	58·26	56·40	57·49	57·39	50·71	59·78	,, 17–21
,, 22–26	5·89	4·06	4·00	2·72	4·11	2·78	3·61	2·78	4·72	2·89	3·06	1·44	3·28	1·67	54·01	50·61	50·74	53·58	48·93	46·42	54·90	,, 22–26
,, 27–31	6·06	4·67	4·33	3·44	3·83	2·83	3·94	3·33	7·11	6·33	5·56	4·39	8·33	6·78	45·66	41·16	41·80	45·63	40·34	36·77	46·59	,, 27–31
April 1–5	10·56	9·72	9·89	8·50	8·72	7·33	8·56	7·28	9·61	8·61	8·56	7·06	9·44	7·72	63·29	58·05	57·85	59·60	61·53	55·61	65·77	April 1–5
,, 6–10	10·22	9·00	9·28	8·11	9·11	7·67	8·44	7·00	10·17	9·17	10·39	8·78	11·33	9·11	60·21	54·57	53·83	56·02	56·65	50·30	61·61	,, 6–10
,, 11–15	5·56	3·61	3·11	1·39	3·06	(0·39)	2·06	0·67	4·94	(2·83)	3·00	(0·83)	3·61	1·89	64·20	56·63	55·02	56·91	56·48	49·79	57·54	,, 11–15
,, 16–20	8·67	7·50	6·89	5·56	6·61	5·00	5·83	5·17	8·33	7·28	7·22	5·67	8·22	6·67	42·51	40·04	41·72	46·13	39·83	36·72	46·62	,, 16–20
,, 21–25	10·17	8·72	7·44	6·06	6·78	5·28	5·11	3·78	10·11	9·11	8·11	7·00	10·61	8·50	56·70	51·77	52·03	55·82	54·34	47·89	59·12	,, 21–25
,, 26–30	9·78	8·44	8·11	6·67	6·39	4·89	5·94	4·56	9·78	8·83	7·28	5·83	9·44	7·72	52·89	49·72	50·99	55·43	49·32	45·76	(55·53)	,, 26–30
May 1–5	9·50	6·94	8·00	5·17	7·89	4·72	7·17	4·50	8·06	5·89	7·28	4·44	6·72	4·33	67·80	63·66	63·36	65·83	63·15	58·91	67·80	May 1–5
,, 6–10	11·11	8·17	10·00	7·00	10·33	7·17	7·78	6·33	9·78	7·17	9·06	6·22	8·83	5·89	68·79	66·35	67·17	71·43	62·78	62·07	68·84	,, 6–10
,, 11–15	10·72	8·33	10·06	7·28	8·83	6·11	7·22	5·56	9·61	6·94	8·28	5·72	8·17	5·44	66·64	62·90	63·20	66·79	59·80	57·72	65·01	,, 11–15
,, 16–20	11·61	8·94	9·33	7·17	9·50	6·56	8·11	6·11	10·89	8·44	9·39	6·89	9·67	6·78	68·79	64·98	64·96	68·26	61·10	59·29	66·66	,, 16–20
,, 21–25	11·22	9·39	10·39	8·83	10·33	8·17	8·56	7·28	11·50	9·39	9·83	8·17	10·83	8·67	59·22	51·88	50·91	53·86	53·75	46·85	56·94	,, 21–25
,, 26–30	11·94	10·56	12·06	10·61	11·83	10·00	13·06	10·56	12·28	10·44	11·72	10·22	13·00	10·78	67·15	58·38	(55·02)	55·51	60·49	52·33	62·34	,, 26–30
June 31–4	12·11	10·17	11·44	9·61	10·94	8·89	11·28	8·67	13·06	10·61	11·94	9·61	13·06	10·39	61·68	54·82	(53·70)	55·21	58·15	51·29	62·07	June 31–4
,, 5–9	11·67	9·44	10·61	8·50	10·33	8·06	10·89	8·11	11·94	10·67	11·50	9·39	13·28	11·22	60·10	52·82	51·14	53·15	55·38	48·67	59·12	,, 5–9
,, 10–14	12·28	10·56	12·06	10·17	12·00	9·28	11·78	9·28	13·50	11·28	12·83	10·50	14·28	11·22	64·45	57·92	57·14	59·50	60·13	53·91	63·00	,, 10–14
,, 15–19	12·28	10·83	12·00	10·33	11·94	9·83	12·17	9·83	12·56	11·33	12·61	10·67	14·06	(11·89)	57·09	50·30	49·92	52·64	55·31	48·25	59·95	,, 15–19
,, 20–24	14·00	12·22	15·11	13·00	16·33	13·67	12·89	11·61	14·56	12·72	16·50	13·89	18·22	15·28	57·82	55·10	56·85	62·93	54·95	51·86	59·90	,, 20–24
,, 25–29	15·28	13·17	15·11	12·72	16·22	12·83	14·78	11·83	17·11	13·94	16·22	13·28	17·39	14·00	765·95	760·80	759·63	762·52	758·12	754·55	762·14	,, 25–29

NOTE.—Meaus which are enclosed in brackets are a little doubtful, one of the five daily means being approximate.

* Doubtful, two of the five daily means are approximate only.

† Being leap year the period, Feb. 25—March 1, comprises six days.

TABLE II.—PART 2.

FIVE-DAY MEANS of the DRY and WET BULB THERMOMETERS and BAROMETER, from the continuous RECORDS at the SEVEN BRITISH OBSERVATORIES, July to December 1876.

Five-Day Periods.	THERMOMETERS. Valencia. 3·66 m. Dry.	Valencia. Wet.	Armagh. 1·22 m. Dry.	Armagh. Wet.	Glasgow. 2·13 m. Dry.	Glasgow. Wet.	Aberdeen. 12·50 m. Dry.	Aberdeen. Wet.	Falmouth. 3·35 m. Dry.	Falmouth. Wet.	Stonyhurst. 2·18 m. Dry.	Stonyhurst. Wet.	Kew. 3·05 m. Dry.	Kew. Wet.	BAROMETER. Valencia. 7·01 m.	Armagh. 63·09 m.	Glasgow. 56·08 m.	Aberdeen. 26·82 m.	Falmouth. 64·31 m.	Stonyhurst. 110·03 m.	Kew. 10·36 m.	Five-Day Periods.
	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	
June 30–4	14·00	12·89	14·72	12·83	13·56	11·56	13·94	(11·17)	16·33	15·11	14·78	13·00	18·00	15·39	761·10	754·55	753·53	(755·10)	758·51	751·19	761·68	June 30–4
July 5–9	14·22	12·72	14·94	12·83	13·89	12·00	14·17	11·61	15·78	14·89	15·94	14·28	18·11	16·00	57·34	50·43	49·69	51·80	54·72	47·30	58·99	July 5–9
,, 10–14	15·56	12·94	15·22	13·17	14·11	12·22	15·78	12·67	15·72	12·72	15·06	12·56	17·56	13·83	70·34	63·56	61·58	62·54	65·57	58·91	68·89	,, 10–14
,, 15–19	18·00	15·61	17·39	14·50	16·83	14·00	16·61	13·78	19·89	16·78	18·72	15·83	21·72	17·06	69·50	64·40	62·64	64·45	63·71	58·83	67·70	,, 15–19
,, 20–24	16·50	14·22	15·94	13·61	15·00	12·72	13·17	11·56	18·44	15·89	17·28	14·72	19·39	16·06	65·98	60·21	59·12	62·02	59·29	54·57	62·85	,, 20–24
,, 25–29	14·67	13·28	13·83	12·11	12·78	10·56	13·17	10·50	17·00	14·56	14·33	12·22	17·94	14·33	61·58	53·70	51·83	53·28	57·77	49·47	60·51	,, 25–29
Aug. 30–3	14·11	12·50	12·83	11·44	12·33	10·78	12·89	11·06	15·94	13·67	13·67	11·72	16·50	13·06	54·60	47·13	46·06	48·27	53·86	44·97	58·83	Aug. 30–3
,, 4–8	15·50	14·22	14·78	13·17	13·78	12·33	14·22	11·89	16·44	14·94	15·17	13·61	17·83	15·11	64·05	56·83	55·38	56·50	61·40	53·83	65·01	,, 4–8
,, 9–13	16·28	13·83	15·67	13·39	15·50	13·17	15·39	12·72	17·56	15·44	17·06	14·06	19·78	15·50	64·15	59·80	59·73	61·91	60·08	56·43	65·11	,, 9–13
,, 14–18	18·00	16·44	18·00	15·83	17·83	15·33	15·00	13·83	17·83	16·78	18·83	16·33	21·72	18·11	56·37	54·87	56·73	61·83	54·24	51·65	59·73	,, 14–18
,, 19–23	16·28	14·33	14·78	13·00	15·28	12·50	13·06	11·39	17·06	15·61	16·28	13·78	17·44	15·33	59·70	55·00	54·09	57·16	52·87	48·67	57·09	,, 19–23
,, 24–28	14·22	12·22	12·28	10·72	12·00	9·78	10·44	8·44	14·44	12·33	11·72	10·11	13·39	10·67	62·75	54·01	51·42	53·04	56·63	48·05	58·38	,, 24–28
Sept. 29–2	13·67	11·78	11·56	10·44	11·67	9·78	11·00	9·33	14·00	12·28	11·78	10·33	13·44	11·44	55·89	46·69	44·64	47·45	50·33	40·09	51·32	Sept. 29–2
,, 3–7	13·78	12·44	12·50	11·28	11·61	10·11	10·89	9·39	15·17	13·94	12·94	11·39	15·61	13·61	51·42	44·64	43·85	46·72	49·52	41·85	53·83	,, 3–7
,, 8–12	12·22	9·83	10·56	9·17	9·89	8·33	9·78	8·50	12·28	10·22	10·89	9·06	11·39	9·50	63·05	53·50	50·18	51·24	54·95	45·88	55·89	,, 8–12
,, 13–17	12·67	10·89	10·17	9·11	10·94	9·39	10·83	10·33	12·39	10·94	11·17	9·67	11·44	10·22	55·13	49·99	49·64	52·79	50·86	45·45	54·95	,, 13–17
,, 18–22	14·72	13·83	13·00	12·06	12·00	10·28	10·72	9·39	13·89	13·28	13·50	11·72	13·33	11·61	60·26	57·31	58·12	61·58	59·58	54·62	65·08	,, 18–22
,, 23–27	13·83	12·83	*12·50	*11·78	12·56	11·61	11·50	11·11	14·67	13·94	12·61	11·72	15·11	13·72	52·94	49·18	49·52	53·60	50·35	44·61	55·16	,, 23–27
Oct. 28–2	12·11	10·61	9·72	8·39	8·78	6·83	7·56	6·33	13·67	12·78	9·17	*7·72	12·22	10·78	52·69	51·32	52·92	56·60	46·42	46·32	53·55	Oct. 28–2
,, 3–7	14·78	13·67	14·28	12·89	13·00	11·67	11·72	11·06	15·17	14·22	14·06	12·89	15·44	14·39	49·54	47·59	49·74	53·86	51·40	47·35	58·46	,, 3–7
,, 8–12	12·56	11·17	11·44	10·28	11·50	10·17	11·17	9·89	13·94	12·89	12·00	10·67	14·83	13·44	43·90	38·54	38·65	*41·39	44·66	38·01	50·91	,, 8–12
,, 13–17	12·00	10·39	10·83	9·61	(10·33)	(9·11)	9·89	9·06	12·72	11·50	11·22	9·78	11·94	11·11	46·88	43·32	44·81	48·83	47·76	42·86	54·62	,, 13–17
,, 18–22	11·22	9·94	10·28	9·61	10·50	9·50	10·39	9·33	11·06	9·78	11·44	9·83	11·39	9·94	62·19	58·00	58·56	63·39	54·09	52·64	59·50	,, 18–22
,, 23–27	11·94	10·72	10·22	9·06	8·67	7·22	8·56	7·17	11·00	9·22	7·61	6·22	8·06	7·11	63·23	61·00	62·09	65·52	60·75	57·95	66·96	,, 23–27
Nov. 28–1	9·67	8·39	7·44	6·61	7·00	5·33	6·22	4·44	8·61	6·50	6·78	4·94	6·72	5·06	70·47	64·88	62·32	62·95	64·07	58·56	67·65	Nov. 28–1
,, 2–6	12·11	10·94	9·00	8·44	8·44	7·44	7·78	6·50	10·33	9·00	8·50	7·67	7·83	6·89	68·47	63·51	62·19	64·42	64·76	58·31	68·26	,, 2–6
,, 7–11	8·28	6·94	3·67	2·44	0·17	(−0·61)	1·39	0·22	6·06	4·06	1·17	−0·17	1·72	(0·67)	58·71	58·23	60·49	64·81	56·02	54·55	62·83	,, 7–11
,, 12–16	10·72	9·72	8·33	7·56	6·94	5·94	7·28	5·94	(12·06)	(11·61)	7·50	6·72	9·78	9·06	41·31	40·04	43·80	50·53	38·80	38·41	47·23	,, 12–16
,, 17–21	(10·22)	(9·11)	8·28	7·44	8·06	7·00	7·94	7·44	10·61	9·50	8·17	7·33	9·33	8·33	57·34	51·32	50·53	54·26	54·75	47·43	58·51	,, 17–21
,, 22–26	9·89	9·11	7·28	6·50	4·00	3·06	5·89	4·61	9·56	8·22	4·39	3·50	6·11	5·06	(49·32)	48·27	51·01	55·10	50·33	47·48	58·68	,, 22–26
Dec. 27–1	8·67	7·50	4·11	3·67	1·17	*0·33	3·44	2·61	9·22	8·00	4·94	4·44	7·00	6·11	45·32	41·24	41·82	45·12	42·02	37·09	47·94	Dec. 27–1
,, 2–6	9·33	8·06	7·89	7·39	7·44	6·61	7·11	6·39	10·83	9·67	8·33	7·56	10·44	9·22	28·89	24·12	25·84	31·48	27·88	22·00	34·91	,, 2–6
,, 7–11	8·44	7·50	5·72	5·06	7·11	6·28	5·06	4·33	9·33	8·00	6·11	5·39	7·11	6·17	56·07	50·79	49·69	51·83	52·82	47·23	57·14	,, 7–11
,, 12–16	8·72	7·39	6·33	5·61	6·00	4·83	5·50	4·44	9·22	8·17	5·72	4·78	5·67	4·89	48·60	46·11	48·17	53·13	48·50	45·51	56·70	,, 12–16
,, 17–21	6·94	5·94	5·22	4·56	3·28	(2·50)	3·28	(2·33)	7·28	6·33	4·61	3·83	6·06	5·39	37·02	34·55	37·53	44·69	32·06	29·76	38·95	,, 17–21
,, 22–26	6·00	4·44	1·89	1·17	0·67	−0·17	2·00	(1·11)	4·94	3·78	0·44	(−0·28)	1·22	0·67	48·42	43·88	46·24	51·67	45·20	42·05	50·96	,, 22–26
,, 27–31	9·83	8·78	7·72	7·06	5·39	4·83	5·00	4·39	11·61	10·83	8·00	7·11	10·56	9·50	740·78	736·56	737·50	740·80	743·34	736·18	750·56	,, 27–31

NOTE.—Means which are enclosed in brackets are a little doubtful, one of the five daily means being approximate.
* Doubtful, two of the five daily means are approximate only.

APPENDIX II.

REPORT on the REDUCTION of the GREENWICH CURVES for 1875 to a COMMON STANDARD with those of KEW.

IN the year 1877 the Meteorological Council resolved to undertake a comparison of the curves of continuously self-recording instruments at neighbouring stations, with a view of ascertaining to what extent their more minute variations may be due to local causes, and to what extent they may express meteorological conditions prevailing over a considerable area.

In order to save time and expense, it was determined, with the permission of the Astronomer Royal, to employ, in the first instance, the existing records at Kew and Greenwich for this purpose. The following report describes the methods employed at the Meteorological Office to reduce the Greenwich curves to a common standard with those of Kew, and the general results of the comparison.

For the purpose of comparing the records of the two observatories, the curves for the year 1875 have been engraved on a series of 25 copper plates, each plate (except the last) containing the traces of 15 days. These are arranged in groups of five days, and in such a way that the curves for Greenwich are immediately under the corresponding curves for Kew of the same date.

The reductions have been made by a pantagraph in precisely the same way as in the case of the Quarterly Weather Report plates, the same precautions being taken to ensure accuracy in the results. The scales of the plates are also the same as those of the Quarterly Weather Report plates, which, indeed, have been the pattern for the work throughout.

1. BAROGRAMS.—The Kew barogram is a photograph of the space between the surface of the column of mercury and the top of the tube. Its lower edge is therefore a curved line representing the height of the mercury from moment to moment, and by a mechanical arrangement the upper edge is made to vary in such a way as to compensate for the effect of temperature upon the height of the barometric column. The time-scale is registered upon the curve by a clock arrangement which cuts off the light for four minutes every two hours, thus leaving a series of equi-distant white lines across the curve. From four to six readings of the standard are made daily, and by comparing the corresponding curve readings with these a daily correction is obtained, which is applied to all the measurements made during that day. The lower edge of the curve is traced with the pantagraph; and a correction for reducing the readings to mean sea level (found by using the mean pressure and mean air temperature for the five days) has been applied to each set of curves.

The scale value of the curves is 1·5 inch = 1 barometer inch.

The Greenwich curves are obtained from a siphon barometer, carrying in its shorter leg a float so arranged as to govern the movements of a spot of light, which is photographed on prepared paper placed to receive it. The trace is therefore a curved line undulating with the changes in atmospheric pressure. No mechanical contrivance is employed for applying a temperature correction, but on each curve there is a base line produced by the photographic process, whose value is determined by comparing the curve ordinates with readings of the standard barometer corrected for temperature. The curve is measured from this base line, and therefore the readings so obtained may be considered equivalent to readings reduced to 32°. A time scale is photographed on the curve from which hour lines have been ruled by hand at Greenwich. The *centre* of the trace has been followed with the pantagraph, and a correction for height above mean sea level has been applied on the same principle as that employed with the Kew observations.

The scale value is 3·8 inches = 1 barometer inch.

Occasionally the Greenwich traces have a peculiar zig-zag appearance, as if the float of the instrument had in some way been retarded, and its movement rendered somewhat jerky in consequence. This is, however, but a slight defect, for owing to the large scale of the original records, it does not much affect the reduced copies, and in pantagraphing such parts of a curve, its effect was still further diminished by omitting the sharp angular turns of the jerks as much as possible where their cause was tolerably clear.

The photographic definition of the Greenwich traces was in general quite sufficient for pantagraphic purposes, and consequently there are not many breaks in the plates due to deficiencies in that respect. There are, however, several small breaks owing to time lost in changing the sheets.

The values given to the photographic zero lines (from which the curves are measured) are sometimes such as to prevent the traces on consecutive curves from exactly meeting, and a small abrupt jump is the result. A good illustration of this will be found at 8 p.m. on July 11th, Plate XIII. It is stated on the curve that the value of the zero lines was changed 0·175 inch, but the distance between the ends of the curves, before and after the alteration, is equal to about 0·210 inch, and thus a gap is left between the two of 0·035 inch, as shown on the plate. These jumps occur generally at about noon, the time of changing the sheets; they may be seen on most of the plates, but those on Plates XII., XIII., XVI., and XX. are perhaps the most striking.

The hour lines ruled on the curves are not always equi-distant, and as there is no good method of allowing for this in the pantagraph, it is possible that some *small* errors in time may exist in the reduced traces. Such errors were guarded against as much as possible by making two or three resettings of the trace wherever it was thought necessary.

2. THERMOGRAMS.—The Kew curves are produced by means of an air speck which divides the mercury in the thermometer tube, and allows a dot of light to fall on the photographic paper. The trace is therefore a *line*, which varies with the changes of temperature; and is measured from a zero line whose value is constant and has been determined by reference to standard observations. The time-scale is registered by an arrangement similar to that of the Kew barograph. The trace of the wet bulb is arranged to fall exactly under that of the dry bulb, and at such a distance from it as to prevent the possibility of the one being super-imposed upon the other. Readings of the standard instruments are made at fixed hours of the day, and compared with those of the curves. No corrections, however, are applied to the latter, the difference between the readings of the two being usually not more than 0°·2 or 0°·3, and the *mean* difference is within 0°·1. In pantagraphing, the upper edge of the line is traced.

The scale value is 0·750 inch = 10° Faht.

The Greenwich thermograms closely resemble the Kew barograms in appearance, the whole extent of the tube above the mercury being photographed. The lower edge of the trace thus records the movements of temperature. The time-scale is ruled by hand, the light is usually turned down for some minutes two or three times a day, leaving a white line upon the trace, and the time-scale appears to be determined by reference to these periods, and also to the observed times of putting on and taking off the paper. The degree lines etched on the stems of the thermometers appear on the curves as a series of parallel white lines, stretching across the photograph; and to facilitate their identification some of them are slightly broader than the others. The curve is tabulated by reference to these lines. The dry and wet traces are photographed on opposite sides of the cylinder, instead of being ranged one under the other, as in the case of the Kew instrument.

Readings of the standard thermometers are entered on the thermograms.

The scale values ware taken to be—dry bulb, 1·02 inch = 10°; wet bulb, 1·12 inch = 10° Faht.

On comparing the curves of the two observatories, the first point which strikes the attention is the almost invariable absence from the Greenwich traces of the smaller oscillations of temperature, which are shown in the Kew curves. This peculiarity will be observed in every plate, and is very marked in Plates VII., VIII. and IX.

The second point that attracts notice is that both the maximum and minimum daily temperatures at Greenwich are almost invariable *higher* than those at Kew, and this appears to be true for the curves generally. It should, however, be mentioned that when compared with the readings of the Standard instruments recorded in ink on the curves, the readings of the Greenwich traces are always *too high*,—the mean difference being for the dry bulb (about) 1°·4, and for the wet bulb (about) 0°·5. If this correction were applied to the readings of the reduced curves it would bring them into closer accord with those of Kew.

On comparing the thermograph readings with those of the standard thermometers the former appear to be always somewhat slow in their movements. This was shown by grouping the differences between the standard and curve readings under the following head:—

Temperature rising, Thermometer steady, Temperature falling;

the mean of each group of differences was then taken, and as a result it was seen that when the temperature was rising, the standard moved more rapidly than the thermograph instrument, and being usually the lower of the two, it gained upon it, so that the difference between them was *decreased;* but when, on the other hand, the temperature was going down, the standard fell more rapidly than the thermometer of the thermograph, and the difference between the two was *increased.* On further testing this matter, by comparing those cases in which the rise or fall was *rapid* with those in which it was only moderate, the difference was still more decreased in the case of a rapid rise, and increased in that of a rapid fall of temperature.

This is clearly shown by the following tables:—

Dry Bulb.			Wet Bulb.			—
Falling.	Steady.	Rising.	Falling.	Steady.	Rising.	
−1·8	−1·5	−1·0	−0·7	−0·4	−0·2	Mean difference.

—	Falling rapidly.	Falling.	Steady.	Rising.	Rising rapidly.	—
Dry - -	−2·2	−1·8	−1·5	−1·2	−0·7	Mean differences.
Wet - -	−0·8	−0·6	−0·4	−0·3	−0·1	

Still another point arises in connexion with this question of the differences between the standard and curve readings. It will be noticed that the difference between the dry and wet bulbs is commonly greater in the Greenwich than in the Kew curves. This is most obvious when the temperature is steady, or when the readings of the dry and wet bulbs are fairly near each other (as on Plate VII.). If the corrections mentioned above were applied to the Greenwich traces their differences would be decreased by about one degree, and the records of both observatories would be very nearly alike. The difficulty in adopting these corrections lies in the fact that the differences between the standard and curve readings vary very much amongst themselves on the same curve—in some cases to the extent of four degrees or more; the amount depending apparently very much on the direction and rapidity of any change which may be taking place in temperature at the time. Thus on July 24th, at 9 p.m., the standard dry bulb reading was 3°·0 *below*, and at 9 a.m. next morning nearly 2°·0 *above*, the readings obtained from the curve. Again, on July 10th at 9 a.m. the standard and thermograph wet bulbs read alike, but at noon there was a difference of 4°·0 between them. The standard wet bulb reading at 3 p.m., July 31st, was 7°·0 lower than the curve reading, but at 9 p.m. this difference was reduced to 2°·5. For some time prior to 9 p.m., July 24th, the temperature had been falling, whilst at 9 a.m. on the following morning a quick and uniform rise (which began at 6 a.m.) was in progress, so that the change in the difference between the standard and curve readings is in the direction indicated as likely to occur under such conditions, by the tables already given.

The application of a *mean* correction to individual cases occasionally brings about impossible results, by placing the wet above the dry. For instance, if the mean corrections already given are applied to both the dry and wet bulb readings for 2, 3, 4, and 5 a.m. on July 23rd, they will stand thus:—

—	UNCORRECTED.			CORRECTED.		
	Dry.	Wet.	Wet ± Dry.	Dry.	Wet.	Wet ± Dry.
2 a.m. -	53·9	53·3	—·6	52·5	52·8	+·3
3 " -	54·0	53·6	—·4	52·6	53·1	+·5
4 " -	54·1	53·7	—·4	52·7	53·2	+·5
5 " -	53·6	53·6	0	52·2	53·1	+·9

The extreme range of the differences between the standard and curve readings exceeds 6°·0 both in the dry and wet bulbs, but, as might be expected, it is greatest in the case of the latter. On July 4th, 9 p.m., the standard dry bulb reading is 3°·9 *lower* than the curve reading, whilst on August 19th, 9 a.m., it is 2°·4 *higher* than the curve; the wet standard on July 25th, 9 a.m., is 3°·0 *higher*, and on the 31st, 3 p.m. 7°·0 *lower*, than the curve readings.

Occasionally the standard readings indicate a movement in temperature contrary to that shown by the curve. On the 17th October temperature *fell*, according to the standard readings, 0°·2, between noon and 0h. 50m. p.m., the curve readings indicating a *rise* during the same period of 2°·0. On September 22th, whilst the standard had fallen, between 9 a.m. and noon, to the amount of 0°·3, the curve readings showed a rise of 3°·0. On July 10th the standard wet bulb read 0°·8 lower at noon than at 9 a.m., the curve showing during that time a rise of 3°·3.

A large number of breaks occur in the Greenwich temperature curves. These are due to two or three causes. First, as in the case of the barometer, the time occupied in changing the sheets produces a break nearly every day, and as the change is usually made near mid-day, when the temperature is frequently changing quickly, the gap is often very large. The principal cause, however, is the failure of the photography, which happens more frequently in the case of the thermograph than with the barograph. At times the failure is complete, the edge of the curve being altogether lost, whilst at other times, although the edge of the trace is sharp enough, no sign of the degree lines can be detected, and it is in consequence impossible to use the curve.

It is probable that to indistinctness of the trace such appearances as may be seen on Plate VII., Noon, April 6th, and on Plate IX., Noon, May 7th, are also due, in which, after the sheet has been changed, the dry-bulb trace commences differently from what would have been expected, judging from its direction before the change was made. In such cases, however, care was taken to follow the pencilling made at Greenwich, and never to pantagraph any part of a curve which was indistinct unless it had been so pencilled over. Other instances of this may be seen on Plate X., Noon, 16th, 19th, 22nd, &c. &c.

Breaks also occasionally occur from the one trace being super-imposed upon the other,—the paper not having been changed in time. Those on Plate XX., October 24th, and on Plate XXIV., December 19th, are partly due to this cause.

It was not always easy to detect when the *wet bulb* was out of action, either from being partially dry or through frost. Unless it was above the dry, or the appearance of the curve was such as to put it beyond doubt that from some cause the thermometer was not in proper action, the traces that were not in any way queried at Greenwich have never been rejected.

A difficulty in pantagraphing arose from the fact that the degree lines are not always equidistant, and that the time-scale varies somewhat. The former could not be allowed for in the pantagraph, and it is no doubt due to the latter cause, though it was compensated for as much as possible, that the variations in the dry and wet traces are not always so synchronous as they apparently should be. It frequently happens that the hour lines ruled on the curves are not at right angles to the degree lines, and, since in pantagraphing it is necessary to set the zero line of the reduced copy parallel to the degree lines on the curve, some small time errors have no doubt been introduced from this cause, particularly in those cases where the obliquity of the time lines was coincident with much movement of temperature.

3. VAPOUR TENSION.—Both the Kew and Greenwich vapour tension curves were obtained from the pantagraphed temperature traces by means of the vapour tension instrument. Upon the accuracy, therefore, with which these reduced traces have been made, as well as upon the fidelity of the original thermograms as records of the march of temperature, the accuracy of the vapour tension trace directly depends.

With regard to the first point it may fairly be said that, owing to the system of measurement and checking adopted, the chance of any error in that direction having escaped notice is very small; but what has already been stated with regard to the want of agreement between the thermograph and standard readings makes it very doubtful whether a curve calculated from the Greenwich thermograms, *uncorrected*, is of much value. In using the vapour tension instrument it should also be remembered that any error in the thermograms, such as that already referred to as affecting the time-scale, &c. (see remarks on thermograms), might possibly throw the curve obtained very much astray. On Plates X., XIII, &c. (May 21, June 30, July 1, 5, 10, 12, &c.) will be found several instances in which it is pretty clear that the curve has been thus influenced, and of course it is impossible to say how many errors arising from similar causes, but which are less easy to detect, are distributed througout the plates.

Owing to the number of breaks in the temperature traces, the vapour tension curves are very imperfect.

4. ANEMOGRAMS.—(*a.*) *Direction.*—The Kew direction trace is produced by a windmill vane acting on a spiral pencil, so arranged that when the trace reaches one extreme of the scale it

recommences at the other; in this way the record is never lost by the pencil running off the paper.

At Greenwich the vane is of the ordinary kind, and the pencil is moved backward and forward by a rackwork; occasionally, when the vane makes more than one complete revolution in the same direction, the instrument is thrown out of action by the pinion becoming ungeared with the rack, and the trace is consequently lost until the instrument is readjusted. To this cause most of the breaks in direction of the wind which may be found in the plates are due. See Plate XII., June 18th, &c.

An examination of the two traces will show that there is much more movement in the Greenwich than in the Kew records; indeed, the original Greenwich trace is usually a broad blurred line, of fairly uniform thickness, made up of innumerable small oscillations of the pencil. In pantagraphing these traces the centre of the line was always followed, taking notice of all those larger oscillations which extended beyond the general width of the line. This greater frequency of oscillation appears to be due to the momentum of the vane used, which has a tendency on receiving an impulse from a gust of wind to travel beyond the true point. In light winds, however, these oscillations are of much greater amplitude than when the wind is stronger, and it is by no means uncommon under such circumstances to find the vane going completely round the compass; it will be easily understood how, in a strong current of air, the motion of the vane would be more readily checked than in a light (and probably gusty) current, when the force which imparts the movement may die out, while the vane is in motion.

It should be mentioned that in pantagraphing, the complete, and almost instantaneous, revolutions in the wind records were disregarded when it was considered certain that they were caused by the instrumental defect already referred to.

The number of gaps caused by defective traces is not large.

The scale of the Greenwich curves is less open than that of Kew, although, as is the case with the other instruments, the time scale is much more extended.

(*b*.) *Velocity.*—The velocity traces both at Kew and Greenwich are obtained from Robinson's cups. The scales of the anemograms, however, are not at all alike, that of Kew being very much more open than that of Greenwich. A velocity of 50 miles produces in the former case a line 2·75 inches in length, and in the latter only about 0·5 inch. In consequence of this smallness of scale, variations in the force of the wind which occur during the hour are not shown, and the trace is merely a record of the total velocity for each hour; even with the larger scale used in the Kew instrument, unless a change of force continues for many minutes and is very considerable in amount, it is not indicated by the trace.

The first step which had to be taken with the Greenwich traces was to *enlarge* them, by means of proportional compasses, to the same scale as the Kew curves. This was mainly because the direction in which the pencil marked the paper was contrary to that of the Kew instrument, and in order to make both curves similar on the plates the pantagraph had to be worked with a setting which would not allow of the necessary enlargement being made at the same time as the reversal.

There are very few breaks in the records; the only one of any extent at Greenwich (Plates VIII. and IX.) is due to the clock being under repair.

5. RAIN.—At Kew a Beckley's self-registering gauge is used for the rain traces; the record at Greenwich being obtained from an Osler's gauge.

Although these gauges differ very much in mechanical detail, yet the principle of both is the same; viz., that the receiver is acted upon by the weight of the water which falls into it, the motion imparted thereby being recorded by means of a pencil upon a paper suitably placed to receive it; and which is made to move in the direction of its time-scale by clockwork.

On the Greenwich curves the scale is of about three-fold greater amplitude than on those of Kew.

In the latter a fall of two-tenths of an inch is represented by a line seven-tenths of an inch in length, whilst on a Greenwich curve such a fall would be shown by a line two inches long.

In dealing with the Greenwich curves the proportional compasses had again to be used, the direction of the original trace preventing the immediate use of the pantagraph.

It results from this inquiry that such a comparison of minute differences as that originally contemplated by the Council cannot be effectually carried out unless the methods employed at the two stations are the same, and the instruments precisely similar. At the same time the comparison has afforded satisfactory evidence of the great general accordance of the records at the two stations in their main features.

ROBERT H. SCOTT.

APPENDIX III.

On the RESULTS of OBSERVATIONS made at the PAGODA, ROYAL GARDENS, KEW, and elsewhere, to DETERMINE the INFLUENCE of HEIGHT on THERMOMETRIC READINGS, on VAPOUR TENSION, and on HUMIDITY.—By ROBERT H. SCOTT, F.R.S.

PART I.—OBSERVATIONS MADE AT THE PAGODA.

IT is hardly needful to state that at present, unfortunately, but slight approach to uniformity exists in the modes adopted in various countries for the exposure of thermometers for meteorological observations. Existing practices differ as to whether the screen should be free-standing or attached to the wall of a building; as to what its material and construction should be; and as to its height above the ground.

As regards the position of the screen, a free-standing screen has been almost universally adopted by the Meteorological Societies in this country, but on the continent, especially in Italy, Norway, and in the greater part of Germany, wall screens are almost invariably used.

The Meteorological Committee were obliged, on financial grounds, to adopt the principle of wall screens for the thermographs at their observatories, but before they did so Professor Balfour Stewart conducted a careful set of experiments at Kew, by which he satisfied himself that the thermograph at that observatory, with its large cylindrical bulbs, recorded practically the same mean temperatures as small pea-bulb thermometers placed in a free-standing screen.—(Report of Meteorological Committee of Royal Society for 1867, page 37.)

As regards the influence exercised on the readings by the height at which the thermometers are placed, the subject has been repeatedly discussed, and at the first International Conference at Leipzig in 1872, Professor Wild and I myself both offered to have experiments made in order to throw light on this question.

The material existing on this subject in this country consists mainly in a series of simultaneous observations of maximum and minimum thermometers at the heights of 5 feet and 105 feet respectively made at the Radcliffe Observatory, Oxford, and published regularly by the late Rev. R. Main, F.R.S., in the Results of Meteorological Observations made at that Observatory since 1861.

In addition, Mr. James Glaisher, F.R.S., published in the Proceedings of the Meteorological Society, Vol. V., p. 29, a discussion of a series of observations taken at Greenwich Observatory with thermometers placed at the heights of 4 feet, 22 feet, and 50 feet respectively. The observations were, however, carried on for the limited period of six weeks, June 25 to August 6, 1868, and embraced only the hottest period of the year.

Professor Wild has already published his results in Vol. V. of his "Repertorium für Meteorologie." He had placed at his disposal a wooden scaffolding about 90 feet in height erected at the Observatory of Pulkowa, for the purposes of the Russian Trigonometrical Survey. On this scaffolding thermometers and hygrometers were erected at the respective heights of 6 feet 3 inches, 52 feet 3 inches, and 86 feet 3 inches. Observations were made three times daily during the months of September and October 1872, and during the summer months of 1873 and 1874, and once daily during the winter months of 1872-3 and 1873-4.

To avoid the expense of a scaffolding, it was suggested that the thermometers should be exposed on the ornamental Pagoda in the Royal Gardens, Kew; an edifice which has already been lent on more than one occasion for scientific purposes.

Application was made by this Office at the end of 1872 to Her Majesty's Office of Works for permission to use the Pagoda for a series of experiments. The required sanction was at once accorded, and access to the gardens and buildings having been most kindly arranged by Sir Joseph Hooker, the Director, and Mr. Smith, the Curator of the Gardens, the observations were commenced May 4, 1873, and continued until July 31, 1874. They were resumed at the end of November 1874, and continued till the end of March 1875. By this means a series of observations extending over two summers and two winters has been secured.

The observations were made by the staff of Kew Observatory at the expense of the Meteorological Office. The duty of taking the observations entailed a walk of 1½ miles on each occasion, and the difficulty of maintaining the series during the autumn months, when several of the Kew staff are absent on vacation, was the cause of the suspension of the observations during nearly four months in 1874.

The observations were taken daily, except on Sundays, at the hours of 9 a.m., 3 p.m., and 9 p.m. On Sundays the 9 p.m. observation was alone taken for the first four months, and the 9 a.m. observation only for the rest of the time.

The instruments used were thermometers of the ordinary pattern adopted by the Meteorological Office, and known as K.O. thermometers, and in addition, maximum thermometers on Negretti's principle, and minimum thermometers on Rutherford's. All of these instruments had been originally verified at Kew. They were re-examined at the expiration of the first period of observation, and as it was found that their corrections were unchanged, the operation of re-comparison with standards was not again repeated.

The screens employed were the ordinary wall-screens supplied by the Meteorological Office for use at sea; they measure in inches 15 × 8 × 5½, and are louvred on three sides. Two of these screens were erected outside the north doors of the lowest, middle, and topmost galleries of the building; one containing a pair of thermometers fitted as a dry and wet bulb hygrometer, the other containing a maximum and a minimum thermometer.

The authorities of the Gardens having stipulated that all thermometers should be entirely out of the reach of visitors to the Gardens, it was out of the question to obtain a series of readings at a lower level than that of the lowest gallery.

On account of the form of the building it was not possible to determine the heights of the respective thermometers by direct measurement with a line, and their altitudes were ascertained by observations with a theodolite on the ground and found to be as follows:—

Lower station - -	22 feet 6 inches.
Middle „ - -	69 feet.
Upper „ - -	128 feet 10 inches.

above the ground, which itself is 26 feet above mean sea level.

The Pagoda is distant 4,400 feet East by North from the Observatory, which is situated almost on the same level, but in a more open locality, in the Old Deer Park. It is loosely surrounded on all sides but the north by shrubberies and trees at about 100 feet distance, the tops of which are all below the thermometers at the middle station.

The following description, taken from W. Chambers "Plans, &c. of Gardens and Buildings at Kew," published in 1763, gives some idea of the magnitude of the building:—

"The base is a regular octagon, 49 feet in diameter; and the super-structure is likewise a regular octagon on its plan, and its elevation composed of ten prisms, which form the ten different stories of the building. The lowest of these is 26 feet in diameter, exclusive of the portico which surrounds it, and 18 feet high, the second is 25 feet in diameter and 17 feet high, and all the rest diminish in diameter and height in the same arithmetical proportion, to the ninth story, which is 18 feet in diameter and 10 feet high. The tenth story is 17 feet in diameter, and, with the covering, 20 feet high, and the finishing on the top is 17 feet high, so that the whole structure, from the base to the top of the Fleuron is 163 feet. Each story finishes with a projecting roof, and round each of them there is a gallery enclosed with a rail. The walls of the building are composed of very hard bricks."

The building is not used as a dwelling, and no fire is lit there.

I have said that the screens were suspended outside the north doors of the several galleries, but these galleries are so narrow that the screens were simply suspended against the wall. They could only be read by leaning out of the door, a service of some little danger in the topmost gallery.

In the discussion, the readings for the lower station at the Pagoda (called P) have been taken as the standard, and the differences between those readings and the readings for the two upper stations (P′, P″,) have been given. This is the mode of discussion adopted by Professor Wild in his paper already mentioned. The simultaneous readings of the thermograph at Kew Observatory (Station O) have also been given. The bulbs of the thermograph thermometers are 10 feet above the ground, and they are cylindrical in shape, being 3·5 inches in length by 0·47 inch in external diameter.

The results are contained in Tables I. to X.

Table I. (which is not reproduced here, but is preserved at the Meteorological Office) gives the actual observations, with the simultaneous records of weather, registered at Kew Observatory.

Table II. gives the monthly means of the temperature. In the compilation of this table, as well as of Tables IV. to VII., care has been taken that the monthly means for each observation epoch shall be obtained from the same number of observations. If from any cause a single observation out of the series of four, is missing, all the observations taken at that time have been omitted.

The results of Table II., which is preserved at the Office, are shown graphically in Fig. I., in which the horizontal line represents the readings for P the lowest Pagoda station, and the differences of the readings from this arbitrary zero-line are plotted. This method appeared to be the only one which would exhibit the very slight differences which usually prevail between the individual stations, within the limits of a reasonable diagram.

Inasmuch as only seven months, January, February, March, May, June, July, and December, are represented in both periods of observation, I have not thought it advisable to deduce annual means, but have given the simple averages of all the monthly values calculated as above described.

If we take the average of the three periods of observation we see that the temperatures at the Observatory (O), at the height of 10 feet, and at the Pagoda (P), at the height of 22 feet 6 inches, only differed by 0°·05, while the means for the two upper Pagoda stations (P′ and P″) were respectively 0°·09 and 0°·06 above that for P.

Dealing in the first instance with the separate observation epochs; at 9 a.m. the upper thermometers on the Pagoda read above the lowest one during the winter months, and below it during the summer months; and the same is true, speaking generally, of the Observatory as compared with the same station.

The differences on the general means are, for O − 0°·15, for P′ + 0°·03, and for P″ − 0°·03. The extreme negative differences occurred in the summer time.

The difference between O and P in July 1873 is large, and there seems some reason to suspect that the observer charged with morning observations during that month took the Pagoda readings habitually too late.

The extreme positive differences occurred in the autumn, and in the cases of P′ and P″ in October 1873. The difference is probably attributable to an unusual prevalence of fog in the early autumn of that year; the notations of "f" and "m" at 8 a.m. in Table I. for the period being, for August 0, for September 7, for October 9, and for November 7.

Fog is almost always associated with an elevation of temperature, increasing with height, and, as we shall see further on, this effect is most marked at night.

At 3 p.m. the Observatory never falls lower than the lowest Pagoda station, a result probably connected with the proximity of trees to the Pagoda; and on the building, with one very slight exception, in December 1873, the temperature is always highest at the lowest station P.

The differences on the general means are, for O + 0°·25, for P′ − 0°·33, and for P′ − 0°·58.

At 9 p.m. the Observatory reads slightly (0°·05) higher than P, and on the Pagoda itself the readings at the uppermost station always stand higher than those below, the differences being, for P′ + 0°·58, and for P″ + 0°·79.

Table III. shows the extreme differences recorded between the temperatures at the Observatory (O) and at the Pagoda (P), and between the three stations on the Pagoda. All differences are referred to the lower Pagoda station as a standard.

TABLE III.

EXTREME DIFFERENCES observed between the READINGS of the DRY BULB THERMOMETERS at the KEW OBSERVATORY 10 feet above Ground, and at the PAGODA 22 feet 6 inches above Ground, also those at 69 feet and 128 feet 10 inches when compared with the Lowest Station.

Month.	9 a.m.						3 p.m.						9 p.m.					
	Observatory. 10 feet. O		Pagoda. 69 feet. P′		Pagoda. 128′ 10″ P″		Observatory. 10 feet. O		Pagoda. 69 feet. P′		Pagoda. 128′ 10″ P″		Observatory. 10 feet. O		Pagoda. 69 feet. P′		Pagoda. 128′ 10″ P″	
1873.																		
May	+0°·8	−1°·5	+0°·9	−0°·7	+0°·2	−1°·4	+2°·6	−1°·0	+0°·6	−1°·4	+0°·1	−2°·1	+1°·1	−1°·2	+2°·0	−0°·1	+ 2°·4	−1°·0
June	+0·9	−2·8	+0·4	−0·8	+0·5	−1·5	+1·8	−1·1	+0·2	−1·5	+0·1	−2·4	+1·3	−1·1	+3·1	−0·1	+ 3·7	−0·4
July	+1·0	−2·9	+0·9	−1·0	+1·1	−1·6	+1·8	−1·5	+0·1	−1·9	+0·1	−2·4	+1·7	−1·1	+2·9	+0·3	+ 3·0	0·0
August	+0·9	−2·2	+0·7	−1·0	+2·5	−1·7	+1·1	−0·9	+0·3	−1·8	0·0	−2·5	+0·8	−0·9	+2·1	+0·1	+ 2·7	0·0
September	+1·0	−1·4	+1·7	−0·8	+6·0	−1·4	+1·4	−0·4	+0·5	−1·0	+0·4	−1·2	+0·8	−2·2	+4·4	+0·1	+ 6·1	0·0
October	+1·2	−2·6	+1·9	−0·3	+4·2	−0·7	+1·7	−1·1	+1·0	−1·1	+4·8	−1·5	+1·7	−0·9	+6·0	−0·2	+10·8	−0·3
November	+0·7	−2·7	+2·0	−0·2	+3·3	−0·6	+1·3	−0·4	+0·6	−0·2	+0·3	−0·5	+1·3	−2·4	+3·2	−0·3	+ 5·1	−0·5
December	+1·0	−1·0	+1·2	−0·5	+2·4	−0·5	+2·3	−0·3	+1·9	−0·6	+4·0	−0·6	+1·5	−0·8	+2·9	−0·2	+ 7·5	−0·3
1874.																		
January	+0·8	−1·9	+1·4	−0·4	+2·7	−1·0	+0·7	−0·7	+0·5	−0·8	+1·1	−0·6	+1·6	−0·8	+1·5	−0·3	+2·4	−0·5
February	+1·6	−1·1	+1·2	−0·4	+3·4	−0·5	+2·4	−0·9	+0·1	−0·6	+0·2	−1·0	+1·0	−0·7	+4·0	−0·4	+4.1	−0·7
March	+1·4	−0·9	+1·2	−0·5	+2·2	−0·8	+1·5	−1·7	0·0	−1·5	−0·1	−1·9	+0·8	−0·9	+2·6	−0·1	+3·8	−0·2
April	+1·2	−0·9	+0·6	−0·7	+0·7	−1·1	+1·6	−2·1	0·0	−1·1	−0·4	−1·9	+0·8	−2·2	+1·8	−0·4	+2·6	−0·5
May	+1·6	−1·9	+0·2	−0·9	+0·1	−1·7	+2·1	−1·2	+1·4	−1·4	+2·3	−2·2	+0·8	−0·9	+1·6	−0·2	+2·6	−0·3
June	+1·1	−2·6	+0·3	−1·6	+1·1	−2·0	+1·8	−1·2	+0·2	−1·7	+0·6	−2·4	+1·0	−0·6	+2·9	−0·8	+4·2	−0·4
July	+0·8	−2·6	+0·5	−1·1	+1·3	−1·6	+2·6	−1·6	+0·4	−1·7	+0·1	−2·3	+0·9	−1·7	+2·9	0·0	+3·7	−0·6
December	+2·1	−1·3	+1·0	−0·4	+2·0	−0·5	+0·8	−0·5	+0·4	−0·4	+0·4	−0·6	+1·0	−0·5	+2·2	−0·4	+4·2	−0·9
1875.																		
January	+1·0	−0·8	+1·8	−0·4	+2·2	−0·6	+0·7	−1·3	+0·4	−0·5	+1·0	−0·6	+1·3	−0·8	+3·1	−0·4	+4·6	−0·5
February	+1·2	−0·8	+2·9	−0·3	+3·4	−0·6	+1·1	−0·9	+0·3	−1·4	+0·1	−1·4	+1·0	−0·6	+4·8	−0·3	+0·7	−0·5
March	+1·1	−1·1	+2·3	−0·6	+4·7	−1·5	+2·0	−0·8	+0·1	−1·4	0·0	−1·7	+1·0	−1·0	+1·1	−0·2	+1·5	−0·5

The following are the greatest observed differences:—

GREATEST POSITIVE DIFFERENCES.

—	9 a.m.	3 p.m.	9 p.m.
O	+2°·1 December 1874	+2°·6 July 1874	+ 1°·7 July October 1873.
P′	+2·9 February 1875	+1·9 December 1873	+ 6·0 October 1873.
P″	+6·0 September 1873	+4·8 October 1874	+10·8 October 1873.

GREATEST NEGATIVE DIFFERENCES.

—	9 a.m.	3 p.m.	9 p.m.
O	−2°·9 July 1873	−2°·1 April 1874	−2°·4 November 1873.
P′	−1·6 June 1874	−1·9 July 1873	−0·8 June 1874.
P″	−2·0 Juue 1874	−2·5 August 1873	−1·0 May 1873.

A marked connexion was proved to exist between the weather and some of the most important of the above differences in reading; the difference of +6°·0 for P′, and the three differences of +6°·0, +4°·8, and +10°·8 for the highest station, P″, being all accompanied by dense fogs.

In Table IV. are given the monthly means of the maximum and minimum temperatures observed at the four stations for the two periods of observation.

TABLE IV.

MONTHLY MEANS of the MAXIMUM and MINIMUM THERMOMETERS at KEW OBSERVATORY 10 feet above Ground, and PAGODA 22 feet 6 inches, with the VARIATION from the latter of those taken at 69 feet and 128 feet 10 inches from the Ground.

Month.	Maximum.				Minimum.			
	Reading at Observatory at 10 feet. O	Pagoda.			Reading at Observatory at 10 feet. O	Pagoda.		
		Reading at 22′ 6″ P	Difference at			Reading at 22′ 6″ P	Difference at	
			69′ P′	128′ 10″ P″			69′ P′	128′ 10″ P″
1873.								
May	59°·6	58°·5	−0°·5	−1°·4	43°·6	44°·0	+0°·1	+0°·2
June	69·1	68·1	−1·1	−1·9	51·5	52·5	+0·2	−0·1
July	73·2	72·5	−1·5	−2·1	54·8	55·8	+0·7	+0·4
August	71·7	70·9	−0·9	−1·8	55·3	55·9	+0·2	+0·1
September	63·6	62·6	−0·4	−1·3	47·5	47·8	+0·1	+0·5
October	56·8	56·1	−0·1	−0·7	41·2	41·3	+0·3	+1·0
November	50·2	49·7	+0·1	−0·5	39·2	39·3	+0·5	+0·7
December	45·6	45·0	+0·1	−0·1	35·7	35·0	+0·6	+0·8
1874.								
January	47·2	47·4	+0·1	−0·5	36·5	36·2	+0·7	+1·1
February	44·3	44·0	−0·1	−0·6	33·7	33·1	+0·6	+1·1
March	51·8	51·2	−0·3	−1·0	37·1	36·5	+0·9	+1·4
April	59·3	58·6	−0·6	−1·5	42·7	42·5	+0·8	+1·2
May	59·6	58·7	−0·7	−1·7	42·5	42·4	+0·6	+1·0
June	67·7	66·8	−0·6	−1·5	49·3	50·0	0·0	+0·4
July	76·2	75·2	−1·1	−2·3	54·8	55·5	+0·3	+0·6
December	38·7	38·5	0·0	−0·4	29·6	29·4	+0·1	0·0
1875.								
January	47·5	47·5	0·0	−0·4	39·8	39·9	+0·3	0·0
February	40·4	40·3	−0·1	−0·7	31·1	31·0	+0·1	−0·1
March	46·1	45·9	−0·3	−1·0	36·1	36·0	0·0	−0·2
Means	56·2	55·7	−0·42	−1·13	42·2	42·3	+0·37	+0·53

Note.—The sign *plus* means that the temperature was in excess of the lower station, and *minus* below it.

This table shows the mean maximum temperature for the whole period to be 0°·5 higher at the Observatory at 10 feet than at the Pagoda at 22 feet 6 inches, while the mean minimum is 0°·1 lower at O than at P. Both results are probably attributable to the more open exposure of the former position. The difference is greatest in the summer months.

The maximum at P′ is, on the mean, 0°·42 lower than that at P, but the difference exceeds 1° in July, while in November, December, and January it is either slightly in the opposite sense or entirely disappears. The minimum at P′ is never lower than at P, the mean difference being 0°·37, and the greatest variation, 0°·9, taking place in March 1874.

At P″ the mean maximum is 1°·13 below that at P, and the difference varies from upwards of 2° in July to 0°·1 in December 1873. The mean minimum at P″ is above that at P to the extent of 0°·53 on the average of all the readings, and the difference ranges between +1°·4 in March 1874, and −0°·2 in March 1875.

In Table V. we have the mean monthly diurnal range of temperature for the four stations. This table is shown graphically in Fig. II.

TABLE V.

MEAN MONTHLY DIURNAL RANGE of TEMPERATURE at the KEW OBSERVATORY 10 feet above Ground, and at the PAGODA 22 feet 6 inches, 69 feet, and 128 feet 10 inches above Ground.

Month.	Observatory, 10 feet. O	Pagoda. 22 ft. 6 ins. P	Pagoda. 69 ft. P′	Pagoda. 128 ft. 10 ins. P″
1873.				
	°	°	°	°
May - - - -	16·0	14·5	13·9	12·9
June - - - -	17·6	15·6	14·3	13·8
July - - - -	18·4	16·7	14·5	14·2
August - - -	16·4	15·0	13·9	13·1
September - - -	16·1	14·8	14·3	13·0
October - - -	15·6	14·8	14·4	13·1
November - - -	11·0	10·4	10·0	9·2
December - - -	9·9	10·0	9·5	9·1
1874.				
January - - -	10·7	11·2	10·6	9·6
February - - -	10·6	10·9	10·2	9·2
March - - -	14·7	14·7	13·5	12·3
April - - - -	16·6	16·1	14·7	13·4
May - - - -	17·1	16·3	15·0	13·6
June - - - -	18·4	16·8	16·2	14·9
July - - - -	21·4	19·7	18·3	16·8
December - - -	9·1	9·1	9·0	8·7
1875.				
January - - -	7·7	7·6	7·3	7·2
February - - -	9·3	9·3	9·1	8·7
March - - -	10·0	9·9	9·6	9·1
Means - -	14·03	13·34	12·54	11·68

The diagram, Fig. II., shows us that during the winter months the differences between the several stations as to range are reduced, and that it is only at that season that the range at the Observatory falls below that at the lowest Pagoda station. This is evidently owing to the circumstance that the influence of the Observatory building in reducing range in winter is greater than that of the Pagoda, which is not artificially warmed.

On the whole there is an excess of range of O over P to the extent of 0°·69, and a diminution as regards P′ and P″ with regard to P to the extent of 0°·8 and 1°·66 respectively.

The differences between O and P varied from +2°·0 in June 1873 to —0°·5 in January 1874. Between P′ and P they ranged from —2°·2 in July 1873 to —0°·1 in December 1874; and between P″ and P they varied between —2°·9 in July 1874 and —0°·4 in December 1874 and January 1875.

Tables VI. to VIII. refer to the hygrometrical state of the air. Table VI., preserved at the Office, gives the monthly means of vapour tension, calculated by Glaisher's Tables (6th edition), and arranged in a similar manner to the preceding tables.

The results of this table are shown graphically in Fig. III.

On the mean of the whole we find that the tension at the lowest Pagoda station, P, is always slightly greater than that at any of the other stations, the differences being—

For O —·0719; for P′ —·0028; and for P″ —0036.

And this condition holds for the means of all the observation epochs,—evidently owing to the fact of the Pagoda being surrounded by trees.

The course of the curves on Fig. III. shows that the hygrometrical observations were not as accordant *inter se* as those of temperature. This is especially remarkable in the summer of 1874. The most careful examination of the original entries of the observations has failed to detect errors of observation or calculation. All that remains, therefore, is to give the curves as they stand.

Tables VII. and VIII. refer to the humidity; the values from which they have been constructed have been calculated by Russell's "Table for Calculating Humidity."

Table VII. is preserved at the Office, and is shown graphically in Fig. IV. As was to be expected, it exhibits the same sort of irregularities as the table for vapour tension (Fig. III.).

The mean humidity for the entire period was 76·7 at O, 78·1 at P, and 76·8 both at P′ and P″. At 9 a.m. at the Observatory (station O) it was 80·2, at P it was 81·3, at P′ 80·2, and at P″ 80·1.

At 3 p.m. the mean humidity at O is 68·5, at P 70·8, at P′ 70·4, and at P″ 70·6, but the differences at this observation epoch vary very considerably.

The essential feature of these values for the warmest portion of the day is the great reduction of humidity at the more open situation of the Observatory. We also see that at the Pagoda there is hardly any difference, on the mean, at the various levels.

At 9 p.m. the mean at O is 81·4, at P 82·7, while at P′ it is 80·4, and at P″ 80·1, thus indicating that at night time the air is always drier at the upper stations.

Table VIII. shows the extreme variations in humidity for the Observatory and the two upper Pagoda stations from the mean of the lowest Pagoda station for each month during the entire period of observation. It is therefore similar to Table III.

TABLE VIII.

SHOWING EXTREME VARIATIONS between the HUMIDITY at the KEW OBSERVATORY at 10 feet and at the PAGODA at 22 feet 6 inches, also VARIATIONS at 69 feet and at 128 feet 10 inches from the LOWEST PAGODA STATION.

Month.	9 a.m.						3 p.m.						9 p.m.					
	Observatory, 10 ft.		Pagoda, 69 ft.		Pagoda, 128 ft. 10 ins.		Observatory, 10 ft.		Pagoda, 69 ft.		Pagoda, 128 ft. 10 ins.		Observatory, 10 ft.		Pagoda, 69 ft.		Pagoda, 128 ft. 10 ins.	
	+	−	+	−	+	−	+	−	+	−	+	−	+	−	+	+	+	−
1873.																		
May	6	5	1	3	3	6	4	4	2	3	4	3	7	5	1	8	10	9
June	7	4	3	2	3	2	22	4	3	1	5	0	4	4	0	8	1	8
July	10	2	2	4	2	4	7	7	2	3	3	4	8	5	0	8	0	8
August	22	6	2	5	3	4	2	8	4	4	7	5	2	6	−1	8	1	8
September	2	6	2	5	3	17	2	8	5	2	3	2	10	4	0	14	0	16
October	2	5	1	10	1	11	7	7	4	4	7	15	8	7	1	6	1	13
November	1	5	1	7	2	10	1	11	0	6	2	4	5	8	0	8	1	11
December	12	11	9	14	3	19	3	16	1	12	3	17	9	4	1	8	2	9
1874.																		
January	3	6	1	6	3	7	4	6	5	2	3	4	3	3	1	8	2	8
February	8	8	5	11	8	7	5	13	1	8	5	7	7	11	1	6	10	9
March	0	15	5	6	3	8	4	7	3	5	7	4	3	13	5	8	4	13
April	2	5	2	4	3	5	3	5	2	7	4	6	6	3	3	5	1	8
May	2	7	3	2	5	3	0	7	6	2	5	3	1	7	1	5	1	8
June	3	7	5	3	4	4	1	8	7	2	2	4	2	8	3	11	1	14
July	4	6	3	2	4	5	5	9	4	2	6	1	2	8	2	7	6	9
December	3	12	3	10	3	9	3	12	2	6	2	6	7	12	9	10	4	8
1875.																		
January	4	6	3	6	2	7	1	4	1	3	4	3	5	5	1	11	0	11
February	7	6	2	8	2	8	3	11	2	7	5	12	4	12	10	7	10	8
March	4	5	10	6	1	11	3	17	8	6	9	13	5	12	0	12	1	7

The following are the greatest observed differences:—

GREATEST POSITIVE DIFFERENCES.

—	9 a.m.	3 p.m.	9 p.m.
O	+22 August 1873	+22 June 1873	+10 September 1873.
P′	+10 March 1875	+ 8 March 1875	+10 February 1875.
P″	+ 8 February 1874	+ 9 March 1875	+10 { May 1873. February 1874. February 1875.

GREATEST NEGATIVE DIFFERENCES.

—	9 a.m.	3 p.m.	9 p.m.
P	−15 March 1874	−17 March 1875	−13 March 1874.
P′	−14 December 1873	−12 December 1873	−14 September 1873.
P″	−19 December 1873	−17 December 1873	−16 September 1873.

If we, as before, compare these differences with the weather prevailing at the times of their respective occurrences, we do not find that much regularity exists.

In two of the cases in which the air at O was much drier than at P the weather was reported "blue sky"; on the third, in June 1873, it was "overcast with rain." In the case of the two upper Pagoda stations there was as little uniformity in the conditions of weather. The extreme differences always occurred in spring. As regards the negative differences, the Observatory showed exceptional humidity as compared with the Pagoda in the spring time, but no regularity is observable as regards the accompanying weather. In the case of P′ and P″, whenever they showed exceptionally low humidity, "mist" or "fog" was reported, except in the case of September 1873 for P″ at 9 p.m.

It is, however, remarkable that only on two occasions, viz., positive differences at 9 p.m., February 1875, for P′ and P″, and negative differences for P′ and P″ at 9 a.m., December 1873, did the extreme variations for the two upper Pagoda stations fall on the same day.

With the object of, if possible, throwing light on the causes to which the observed differences in the vertical distribution of temperature and humidity was due, Professor Wild, *loc. cit.*, states that he had compared all the instances of unusual differences in his records in the first instance with the reports of amount of cloud. The result was unsatisfactory, and the confusion was increased by taking into consideration the direction and force of the wind. He therefore goes on to say:—

"This confusion at once disappears when the circumstances are examined in connexion with the conditions of weather, as shown by synoptic charts. I have derived the following general results from this inquiry:—

"The humidity decreases with the height with extraordinary rapidity (12 to 26 p.c. for 80 feet) when the observations are taken within an anticyclonic area, *i.e.*, when the wind which is blowing is connected with such a system; and on the other hand, the humidity increases upwards very rapidly (10 to 35 p.c. for 80 feet) when we are in the immediate vicinity of a cyclone."

In order to test the validity of this statement as regards the data now under consideration, the observations in Table I. have in the first instance been classified according to the seasons, and also according to the hour of observation. It is unfortunate that the regular interruption of the tri-daily observations on Sundays impairs the continuity of the record and the value of these results. The classification has been simply into summer observations, with temperatures exceeding 50°, and winter observations with temperatures below that limit. All the observations have then been extracted from the original records which were taken while Kew was within a definitely characterised cyclonic or anticyclonic area. The only records discussed for this purpose have been those at the three Pagoda stations. The following table gives the general results. In it, as in all previous tables, the values at the lower Pagoda station, P, are taken as standards, and the values for the stations P′ and P″ are given as differences:—

TABLE IX.

DISTRIBUTION of TEMPERATURE and HUMIDITY, with HEIGHT, at the THREE PAGODA STATIONS, during CYCLONES and ANTICYLONES.

	—	No. of Observations.	Temperature.			Relative Humidity.		
			Mean at P.	Difference for P′.	Difference for P″.	Mean at P.	Difference for P′.	Difference for P″.
9 a.m.	SUMMER.							
	Average of all observations	—	58°·23	−0°·12	−0°·37	72·8	−0·3	−0·1
	Cyclones	7	56·00	−0·10	−0·60	81·0	0·0	+1·0
	Anticyclones	28	58·87	−0·21	+0·41	76·0	−2·0	−2·0
	WINTER.							
	Average of all observations	—	40·30	+0·16	+0·28	89·0	−1·8	−2·1
	Cyclones	31	40·04	+0·05	+0·02	88·0	−1·0	−2·0
	Anticyclones	33	38·60	+0·33	+0·72	89·0	−2·0	−2·0
3 p.m.	SUMMER.							
	Average of all observations	—	63·66	−0·54	−0·93	60·7	+0·5	+0·8
	Cyclones	6	60·67	−0·29	−0·67	59·0	+1·0	+2·0
	Anticyclones	26	68·29	−0·72	−0·88	56·0	+1·0	+1·0
	WINTER.							
	Average of all observations	—	44·61	−0·13	−0·26	79·8	−1·2	−1·0
	Cyclones	27	42·90	−0·08	−0·29	83·0	−1·0	0·0
	Anticyclones	30	44·79	−0·04	−0·06	77·0	−2·0	−2·0
9 p.m.	SUMMER.							
	Average of all observations	—	56·32	+0·73	+0·89	77·9	−2·4	−2·8
	Cyclones	8	55·88	+0·51	+0·67	78·0	−2·0	−4·0
	Anticyclones	28	58·54	+1·32	+2·10	77·0	−4·0	−6·0
	WINTER.							
	Average of all observations	—	40·74	+0·44	+0·71	87·0	−2·2	−2·4
	Cyclones	28	40·38	+0·12	+0·11	89·0	−2·0	−2·0
	Anticyclones	29	39·47	+0·92	+1·55	87·0	−2·0	−3·0

It is obvious that these results are not strictly comparable with each other owing to the great differences which exist between the numbers of available observations; but disregarding this unavoidably inconvenience, it is interesting to see how the cyclonic and anticyclonic conditions imprint their respective characters on the temperature at the lowest station.

At 9 a.m. the effect of cyclones is to depress the temperature in summer owing to their concomitant rainfall and cloud. In winter this effect is hardly noticeable. The action of anticyclones is to elevate the temperature slightly in summer and to depress it considerably in winter.

At 3 p.m. cyclones lower the temperature in summer by 3°·0, and in winter by 1°·7, owing to the reduction of diurnal range; while anticyclones in summer raise the temperature to the extent of 4°·6, and in winter produce a slight elevation of 0°·2: the increase of diurnal range, owing to the clearness of the sky, having made itself perceptible.

At 9 p.m. cyclones exert a slight lowering effect on the temperature both in summer and winter while anticyclones in summer produce a rise of 2°·2, and in winter a fall of 1°·2.

Let us look now to the vertical distribution of temperature and humidity. Taking the observation epochs separately as before, and commencing with 9 a.m., we do not notice any difference of great moment in summer as regards temperature, except that during anticyclones the mean temperature at the highest station is above that at the lower ones. As regards humidity, during anticyclones the air is decidedly drier at both the upper stations than below.

In winter the temperature during anticyclones increases upwards at double its average rate while the humidity does not decrease more quickly than at the rate shown by the mean.

At 3 p.m. the influence of both types of weather is hardly appreciable in summer; in winter, however, the temperature is more equally distributed during anticyclones, and, as might be expected, the humidity decreases more rapidly upwards.

At 9 p.m., however, the changes are most marked. In summer, at this hour, the rate of vertical increase is twice its average value during anticyclones, while the humidity shows a corresponding change in the opposite direction.

In winter, at nightfall, it is the cyclonic systems, and not the anticyclonic as is the case at 3 p.m., which show an equable temperature in the vertical direction, while the anticyclones indicate a rate of vertical increase which, as in summer, is double its average value.

The foregoing *mean* values therefore afford hardly any confirmation of Professor Wild's statements as to the high rate of alteration of humidity during cyclones and anticyclones respectively. This may, in part, be due to the fact that Professor Wild's observations were taken on a free-standing scaffolding, while those now under consideration were taken on the wall of a building. Moreover, the lowest station on the Pagoda was at the level of 22 feet 6 inches above the ground, instead of 4 feet, as would have been desirable. In part, however, the difference may be attributable to the contrast between a decidedly continental climate, such as that of St. Petersburg, and an insular one, such as that of London. It would naturally be expected that greater differences would be found under the former than under the latter conditions.

It is, however, obvious that the average of all the instances of either type of weather, anticyclonic and cyclonic, would not be likely to exhibit as strongly marked characteristics as the values for a shorter period, and accordingly two anticyclonic intervals have been taken, one for the winter and the other for the summer.

The former embraces the period from December 2 to December 14, 1873, the latter that from July 13-20, 1874.

Taking the winter anticyclone first, it is interesting to find that at 9 a.m. the vertical distribution of temperature is nearly identical with that shown by the average of all the winter anticyclones, the station P′ showing a change as regards P of +0°·27 instead of +0°·33, and P″ a change of +0·70 instead of +0°·72. At 3 p.m., however, a contrast is observed. The difference between P and P′ is +0°·28 instead of −0°·04, and between P and P″ it is +0°·66 instead of −0°·06. In this case, therefore, the anticyclonic conditions produced the results anticipated by Professor Wild, and which were not perceptible on the average of all the cyclonic observations.

Date.	9 a.m.						3 p.m.						9 p.m.					
	Temperature.			Relative Humidity.			Temperature.			Relative Humidity.			Temperature.			Relative Humidity.		
	P.	P′.	P″.	P.	P′.	P″.	P.	P′.	P″.	P.	P′.	P″.	P.	P′.	P″.	P.	P′.	P″.
WINTER.	°	°	°	%	%	%	°	°	°	%	%	%	°	°	°	%	%	%
1874, December 2-14	36·22	+·27	+·70	93·0	−0·6	−1·7	39·07	+·28	+·66	89·7	−3·0	−3·9	34·91	+1·03	+2·14	93·8	−3·3	−3·9
SUMMER.																		
1874, July 13-20	66·71	−·07	−·05	71·6	−0·2	+0·2	76·43	−0·97	−1·39	51·4	+1·0	+1·6	65·29	+1·12	+1·85	71·4	−3·3	−3·7

At 9 p.m. also the same phenomena were reproduced, but in a less marked degree. The difference between P and P′ was +1·03 instead of +0°·92, and between P and P″ it was +2°·14 instead of +1°·55.

The results for humidity did not differ very much from the average figures for all the winter anticyclones given in Table IX.

The summer period presents no features of special interest, except that the weather was remarkably warm, the thermometer averaging 66°·7 at 9 a.m. for the entire week. At that observation epoch, however, the vertical reduction of temperature was almost obliterated, P′ being 0°·07 and P″ 0°·05 colder than P, instead of 0°·21 and 0°·41 respectively. The figures for 3 p.m. and 9 p.m. did not differ from the means for summer anticyclones given in Table IX.

As before, the humidity for the selected period follows the same law of distribution as that exhibited by the general average.

In the third and last place, it may be interesting to consider the effect of various types of weather upon the distribution of temperature and humidity in a vertical direction, as these appear to lead to more definite results than Professor Wild could obtain.

The types of weather appearing in the original observations are "*b*," "*c*," "*r*," "*o*," "*m*," and "*f*." Of these I have only taken four, viz.:

"*b*" when the sky was almost entirely clear.
"*o*" when the sky was almost entirely covered.
"*r*" when rain was actually falling at the time of observation.
"*f*" when fog was reported as prevalent.

It has not been thought desirable to deal with entries of "*c*," "detached clouds" or "*m*" "mist," owing to the great latitude which must be allowed in interpreting such entries. It is of course true that "fog" is more or less a vague statement, but it may be considered to be somewhat less so than "mist."

The observations have been sub-divided into a summer and a winter series, as in the discussion which has just been given.

TABLE X.

DISTRIBUTION of TEMPERATURE and HUMIDITY with HEIGHT at the THREE PAGODA STATIONS during VARIOUS CONDITIONS of WEATHER.

Hour.	SUMMER.								WINTER.							
	Weather.	No. of Observations.	Temperature.			Relative Humidity.			Weather.	No. of Observations.	Temperature.			Relative Humidity.		
			Mean at P.	Difference for P′.	Difference for P″.	Mean at P.	Difference for P′.	Difference for P″.			Mean at P.	Difference for P′.	Difference for P″.	Mean at P.	Difference for P′.	Difference for P″.
			°	°	°						°	°	°			
a.m.	Average of all Observations		58·23	−0·12	−0·37	72·8	−0·3	−0·1	Average of all Observations		40·30	+0·16	+0·28	89·0	−1·8	−2·1
	b	84	59·49	−0·12	−0·22	66·8	0·0	0·0	**b**	66	39·86	+0·36	+0·54	85·6	−2·0	−2·4
	r	12	55·88	+0·12	−0·13	85·7	−1·3	−1·0	**r**	34	42·75	−0·04	−0·15	91·5	−0·9	−1·4
	o	62	56·76	−0·19	−0·56	78·3	−0·4	0·0	**o**	91	43·76	−0·06	−0·19	87·4	−1·4	−1·1
	f	5	50·00	+0·94	+2·76	96·2	−2·8	−8·4	**f**	50	33·24	+0·46	+1·13	96·6	−2·2	−3·5
3 p.m.	Average of all Observations		63·66	−0·54	−0·93	60·7	+0·5	+0·8	Average of all Observations		44·61	−0·13	−0·26	79·8	−1·2	−1·0
	b	64	67·75	−0·73	−1·17	53·2	+0·9	+0·9	**b**	55	46·13	−0·23	−0·36	69·7	−1·0	−0·6
	r	11	54·54	−0·12	−0·31	77·8	−0·6	+0·3	**r**	16	44·47	−0·18	−0·33	92·2	−0·9	−0·7
	o	40	61·43	−0·36	−0·69	69·2	+0·4	+0·8	**o**	106	46·30	−0·16	−0·42	81·0	−1·1	−0·4
	f	0	—	—	—	—	—	—	**f**	23	34·73	+0·21	+0·47	93·5	−1·7	−2·0
p.m.	Average of all Observations		56·32	+0·73	+0·89	77·9	−2·4	−2·8	Average of all Observations		40·74	+0·44	+0·71	87·0	−2·2	−2·4
	b	105	56·88	+0·87	+1·10	75·7	−2·9	−3·3	**b**	73	40·00	+0·53	+0·86	83·6	−2·6	−2·6
	r	14	51·88	+0·27	+0·23	89·9	−2·1	−2·4	**r**	21	44·46	−0·06	−0·09	92·3	−1·1	−1·3
	o	67	56·42	+0·45	+0·51	78·5	−1·7	−1·0	**o**	97	42·87	+0·10	+0·07	85·5	−1·8	−1·4
	f	6	51·10	+2·67	+4·15	90·3	−8·2	−11·8	**f**	30	32·61	+1·62	+2·80	94·0	−3·0	−4·9

From these figures it appeared that at 9 a.m., during the summer months, and under a clear sky, both P′ and P″ read below P, but the differences are not large, being 0°·12 and 0°·22 respectively. In winter, however, at the same hour, the distribution of temperature is completely reversed and the readings increase with height, P′ being 0°·36 and P″ 0°·54 above P.

At 3 p.m., in sunshine, the variation is in the same direction all the year round, P″ being below P′ and P′ below P, the differences being of course greater during the warmer months.

At 9 p.m. similar conditions obtain during both periods, but their direction is reversed, P″, the highest station, having the highest temperature and P the lowest, the differences still being greater in summer than in winter. In both cases the difference for the lower interval P′—P is much greater than for the upper P′—P″.

We now come to an overcast sky. When this prevails at 9 a.m. and 3 p.m. the temperature always decreases with height, but the rate of fall is somewhat more rapid in summer than in winter. The influence of cloud is however best exhibited by the winter 9 a.m. observations, where, under a clear sky, the difference P″—P = +0°·54 and P′—P = +0°·06, as already stated, while with an overcast sky the differences are −0°·19 and −0°·06 respectively.

At 3 p.m. there is very little difference in winter between the readings under the two conditions of a clear and a cloudy sky respectively, but in summer a blue sky doubles the height variation at this hour as compared with the effect of a cloud canopy.

At 9 p.m. P stands lowest, P′ and P″ reading almost the same, but in winter the difference P—P′ is less than one-fourth of that observed during summer. The effect of the presence of cloud at night in checking the cooling of the earth's surface by radiation is well marked at both seasons, but more strongly in winter, where with an absence of cloud the difference between P″ and P was + 0°86, but when the weather was "o" it had fallen to + 0°·07.

The results given by the observations taken when rain was falling are very discordant, a fact probably attributable, in the first case, to a paucity of readings under such conditions, and secondly, to the circumstances that the letter "r" may indicate a passing shower or a continuous downpour. The same difficulty was experienced by Dr. Wild when dealing with similar data.

Naturally it would be supposed that the fall of rain would tend to equalise the distribution of temperature throughout the different strata; and this is found to be the case, for almost without exception at all three hours of observation the differences during rain are less than those found with an overcast sky. Two cases, however, deserve special notice; at 9 a.m. in summer, P′ at the height of 60 feet is the warmest station during rain, and at 9 p.m. in winter the temperature during rain diminishes with height, on the average of 21 observations, while it increases with elevation, with a blue sky, with an overcast sky, and with fog.

Fog, as has already been stated, accompanies the greatest contrasts of temperature which have been recorded between the different heights, its effect being invariably to cool the lower thermometers to a considerable extent. In every case P″ reads above P′ and P′ above P.

The maximum mean differences of +2°·67 for P′, and +4°·15 for P″ occur at 9 p.m. in summer. In winter these values are +1°·62 and +2°·80 respectively.

The influence of fog does not appear to be confined especially to instruments near the ground, but the increase in temperature at P′ bears on the mean an approximate ratio to that at P″ of one-third at 9 a.m., and two-thirds at 9 p.m. In winter at 3 p.m. the ratio is intermediate between these values. There is not a single instance of fog at 3 p.m. in summer.

As regards humidity, the distribution of aqueous vapour in the air, under a clear sky, is principally affected by season. At 9 a.m. when in summer the relative humidity is constant at all three heights, in winter the differences between P and P′ and between P and P″ are −2·0 and −2·4 respectively.

At 3 p.m. the hygrometric values do not differ as much as one per cent. at the different heights at either season, but the signs of the variations are different, the humidity increasing with height in summer and decreasing in winter.

At 9 p.m. the humidity always diminishes rapidly between P and P′, and to a greater extent than under any other atmospherical conditions excepting the existence of fog.

With an overcast sky the humidity is always greater than when the sky is clear, and the differences due to elevation above the ground are somewhat less. The reduction is chiefly noticeable at 9 a.m. in winter and at 9 p.m. in winter and summer.

At 3 p.m. it will be remarked that, as in the case of sunshine, the humidity is greatest at the uppermost station.

The evidence as to the effect of rain on the distribution of moisture in the air is somewhat contradictory, as was the case when considering temperature. At 3 p.m. in summer, rain increases the humidity at P″ and reduces it at P′, both being compared with P, whilst on all other occasions the humidity decreases with height at both elevations, but not always in the same proportion; the effect attaining a maximum at 3 p.m. in summer.

As might be expected, from what has been said before, the greatest variations in the vertical distribution of humidity occur with fog at night, and this principally in the warmer half year: the values of P″—P and P′—P being respectively −11·8 and −8·2 at 9 p.m. in summer, and −4·9 and −3·0 at the similar hour in winter. Both cases, however, show the rate of decrease to be far more rapid in the lower strata than in the upper.

At 9 p.m. and 3 p.m. in winter we find a somewhat similar distribution of moisture during fog, but at 9 a.m. in summer, under such conditions, the greatest change appears to take place between P″ and P′, but this statement rests on the evidence of only five observations.

PART II.—OBSERVATIONS MADE AT CAMDEN TOWN.

In order to connect the results of observations at the height of 22 feet and upwards with those made at the elevation of 4 feet above the ground, I am able to avail myself of a series of observations of thermometers, similarly exposed, at the height of 4 feet and 20 feet respectively, which were made at Camden Town during the years from 1867 to 1872. These have been most generously placed in my hands by Mr. G. J. Symons, F.R.S., who himself conducted the experiments. The form of screen used was Glaisher's, and at the upper station it was erected on a post.

Mr. Symons supplies the following introductory notes as to the observations:—

" The garden in which the earlier observations were made was about 20 feet by 70 feet; the subsequent series was taken in one about 25 feet by 125 feet, which is also drier than the former one, and entirely free from trees. The soil, garden mould resting on London Clay. The two sites only differ 11 feet in altitude and are equally open to the south and west.

" All readings were made by myself (having at that time no male assistant), and therefore there are not infrequent blanks. There was one difference between the mode of observation at 4 feet and 20 feet. At 4 feet two observations were made daily, viz., at 9 a.m. and 9 p.m.; at the former hour the minimum thermometers were read, and at the latter hour the maximum thermometers.

" Owing to the danger of climbing the pole when carrying the lantern and note-book, very few night readings were taken at the upper station, and the maximum and minimum thermometers were both read at 9 a.m., the former being entered to the day previous to that of reading off."

"The errors of the upper thermometers were not accurately determined until after the conclusion of the experiments. The maximum was then 0°·2 too high, and the minimum 0°·1 too high. The dry and wet were correct. All the 4 feet thermometers were correct.

"The same thermometers were used throughout.

"My own *impression* is that the 4 feet readings are too high by day, owing to reflection from ground, walls, &c., and rather too low by night from radiation not being sufficiently guarded against."

The observations have been treated in a similar manner to those already discussed, dealing only with the records for 9 a.m.

Table I_S. (which it is not proposed to reproduce here) contains the actual observations, with the relative humidity and the extent of diurnal range. In each case the values for the upper station are given as differences from those at the lower. The reason of giving diurnal range instead of maximum and minimum readings is sufficiently explained in Mr. Symons' notes above quoted; the readings taken from the maximum and minimum thermometers are entered to different days.

Table II_S. represents the means and the differences for each month, derived from the entire series of observations, extending, with intervals, over 4½ years. These are somewhat discordant when compared year by year, owing to the paucity of available observations in some of the months. However, as far as this evidence goes, we find that, as was the case at the Pagoda at 9 a.m., the mean at the upper station was generally above that at the lower; the months in which a negative sign is found falling, with only one exception, in the spring.

Table III_S. gives the extreme variations observed. These range from +3°·8, July 14, 1870, to −3°·1, May 6, 1869. It is unfortunate that we possess no weather record from Camden Town, but at Kew the weather was "fine and bright" on the former, and "fair, but overcast" on the latter occasion.

Speaking very generally, it would appear that both the positive and negative differences reached their maxima in the months of June and July, but much dependence cannot be placed on any such generalization, owing to the deficiency of material available for some of the months.

Table IV_S. gives the mean monthly diurnal range of temperature at the two stations, which show that the greatest positive difference between the upper and lower stations was 0°·4 in December 1867 and in January 1870 (the difference of +0°·7 in July 1871 only depends on eight observations). The greatest negative difference was −2°·1 in April 1869 (15 observations). However, we have −1°·9 in May 1867 and −1°·8 in April and May 1870, supported by a full month's observations.

In Tables V_S. and VI_S. we have the results for humidity, which, however, only extend to 2¼ years.

Table V_S. gives the monthly mean of the humidity at the lower station and the variation from that value at the upper. It is, as before, useless to discuss these minutely, but it must be observed that the results for the year 1867 indicate a general excess of humidity at the upper station, while the reverse is the fact in 1869.

Table VI_S. shows the extreme variations of the humidity at the upper from that at the lower station. These range from +18 in January 1868 and +16 in November 1867 to −14 in February and March 1867.

In conclusion it can only be said that so far as the evidence adduced in this paper goes, it indicates that, on the average of a considerable series of observations, the influence of height on mean thermometrical and hygrometrical results is not very great, but that on individual occasions very material differences are observed.

It is evident that in order to attain any satisfactory account of the conditions which may give rise to the strong contrasts in temperature, &c. between the different strata, such as those occasionally reported during fog, it would be necessary that the records at the various heights should be supplemented by observations of radiation thermometers, &c., and by carefully prepared notices of the general atmospherical conditions and appearance, not only at the precise epoch of observation, but also of those which preceded or succeeded it.

It is clear that the mere entry of the weather at the time is quite insufficient to throw light on the causes of the observed phenomena.

The present paper can therefore only be considered as an indication of certain results which it is hoped may be confirmed, and perhaps explained, whenever a more complete series of observations are available.

My best thanks are due to Mr. G. M. Whipple and Mr. T. W. Baker, of the staff of Kew Observatory, and to Mr. James S. Harding, Junr., Mr. John A. Curtis, and Mr. William L. Dallas, of our own staff, for the assistance they have rendered to me in the preparation of this paper.

ROBERT H. SCOTT.

TABLE II$_{S}$.

MONTHLY MEANS of the READINGS of THERMOMETERS at 4 feet above the Ground, with the MEAN DIFFERENCES at 20 feet at 9 a.m.

Month.	1867.			1868.			1869.			1870.			1871.		
	Number of Days on which Observations were made.	Reading at 4 feet.	Difference at 20 feet.	Number of Days on which Observations were made.	Reading at 4 feet.	Difference at 20 feet.	Number of Days on which Observations were made.	Reading at 4 feet.	Difference at 20 feet.	Number of Days on which Observations were made.	Reading at 4 feet.	Difference at 20 feet.	Number of Days on which Observations were made.	Reading at 4 feet.	Difference at 20 feet.
January - -	29	34·8	+0·4	17	40·2	+0·2	27	41·0	+0·5	19	39·9	+0·1	22	34·4	−0·1
February -	28	45·2	+0·1	28	43·4	+0·6	25	46·1	+0·5	22	37·1	+0·1	23	41·4	0·0
March - -	19	40·9	+0·1	17	45·4	+0·2	25	38·6	−0·1	23	42·0	0·0	25	43·9	+0·2
April - -	29	51·4	−0·2	24	51·7	+0·2	15	54·6	+0·2	27	50·3	0·0	6	46·7	+0·1
May - -	29	56·3	−0·2	29	61·5	+0·5	16	55·0	−0·1	27	55·8	+0·2	27	55·4	+0·1
June - -	20	61·1	−0·7	22	66·6	+0·5	24	59·0	−0·4	19	64·5	+0·3	27	57·8	0·0
July - -	31	62·5	+0·4	26	71·0	0·0	19	65·9	+0·4	19	67·5	+0·6	9	62·9	+0·7
August - -	30	64·9	+0·3	—	—	—	13	61·4	+0·4	20	62·4	0·0			
September -	9	60·9	+0·1	12	58·8	+0·7	—	—	—	10	60·9	+0·2			
October - -	23	51·9	+0·2	21	49·1	+0·8	25	48·3	+0·3	15	49·4	+0·3			
November -	30	42·0	+0·2	24	42·2	+0·2	25	44·0	+0·1	27	41·8	+0·1			
December -	28	39·0	+0·5	29	46·0	+0·6	24	38·2	+0·1	19	38·9	0·0			

TABLE III$_{S}$.

SHOWING EXTREME VARIATION of THERMOMETER observed at 4 feet and 20 feet above the Ground, at 9 a.m.

Months.	9 a.m. Extremes between 4 feet and 20 feet.		9 a.m. Extremes between 4 feet and 20 feet.		9 a.m. Extremes between 4 feet and 20 feet.		9 a.m. Extremes between 4 feet and 20 feet.		9 a.m. Extremes between 4 feet and 20 feet.	
	1867.		1868.		1869.		1870.		1871.	
January - -	+2·4	−1·2	+1·8	−0·6	+1·4	+0·1	+0·7	−1·0	+1·1	−0·8
February - -	+0·7	−0·9	+2·9	−1·0	+2·0	−0·4	+0·5	−0·7	+1·0	−0·7
March - -	+0·7	−0·5	+1·2	−0·8	+1·2	−0·7	+0·7	−1·4	+0·9	−0·8
April - -	+1·4	−1·8	+1·2	−0·8	+2·1	−1·0	+1·4	−1·9	+0·9	−0·5
May - -	+1·6	−1·5	+2·0	−2·2	+1·6	−3·1	+1·5	−1·8	+1·8	−2·1
June - -	+1·5	−2·3	+2·0	−1·2	+1·2	−2·0	+1·8	−1·0	+0·8	−1·1
July - -	+3·0	−1·0	+3·0	−2·4	+2·0	−1·6	+3·8	−0·6	+2·9	−0·2
August - -	+1·5	−1·2	—	—	+1·1	−0·5	+1·0	−1·6	—	—
September - -	+2·0	−1·0	+2·0	−1·5	—	—	+1·1	−0·5	—	—
October - -	+1·6	−1·4	+3·2	−0·3	+1·9	−0·3	+1·6	−0·2	—	—
November - -	+3·4	−1·9	+1·3	−0·6	+0·6	−0·5	+0·8	−1·9	—	—
December - -	+2·0	−0·8	+1·2	−0·1	+1·0	−0·3	+0·3	−0·4	—	—

TABLE IV$_{S}$.

MEAN MONTHLY RANGE of TEMPERATURE, at 4 feet and 20 feet.

Months.	1867.			1868.			1869.			1870.			1871.		
	Number of Days on which Observations were made.	At		Number of Days on which Observations were made.	At		Number of Days on which Observations were made.	At		Number of Days on which Observations were made.	At		Number of Days on which Observations were made.	At	
		4 feet.	20 feet.		4 feet.	20 feet.		4 feet.	20 feet.		4 feet.	20 feet.		4 feet.	20 feet.
		°	°		°	°		°	°		°	°		°	°
January - -	28	10·0	9·8	14	9·2	9·4	24	8·9	8·9	11	7·2	7·6	20	8·1	8·2
February -	28	10·2	10·0	28	11·9	11·0	23	10·3	9·3	20	10·3	9·4	23	10·9	10·5
March - -	19	13·5	12·1	16	15·3	14·8	27	12·9	11·6	16	14·8	14·0	27	18·1	17·4
April - -	26	15·9	14·6	21	18·0	17·1	15	25·4	23·3	25	25·3	23·5	5	14·8	13·9
May - -	28	19·7	17·8	30	22·3	21·4	14	18·7	16·7	29	23·5	21·7	28	22·8	22·2
June - -	22	19·9	18·4	25	23·9	23·1	26	21·1	19·5	19	22·4	22·4	22	17·9	17·3
July - -	31	19·0	17·6	29	26·2	24·5	22	24·2	22·9	20	22·0	22·1	8	17·4	18·1
August - -	31	19·0	18·1	—	—	—	14	19·8	18·3	19	22·4	21·1			
September -	7	17·0	15·9	12	17·2	15·3	—	—	—	10	17·5	16·9			
October -	23	14·1	13·0	23	18·2	16·6	27	15·3	14·3	11	13·1	13·1			
November -	29	11·8	11·6	24	10·9	9·6	26	10·9	11·0	28	12·3	11·6			
December -	25	9·6	10·0	24	9·1	8·5	21	10·0	9·9	17	7·5	7·5			

TABLE V_S.

MONTHLY MEANS of the HUMIDITY of the AIR at 4 feet, and the VARIATION at 20 feet, at 9 a.m.

Months.	1867.			1868.		
	Number of Days.	At 4 feet.	Difference at 20 feet.	Number of Days.	At 4 feet.	Difference at 20 feet.
January - - - -	29	93·9	0·0	17	89·8	0·0
February - - - -	28	89·0	−3·2	27	83·9	+0·4
March - - - -	19	81·2	−2·9	16	78·4	−0·7
April - - - -	29	75·8	+0·6	23	77·5	−0·4
May - - - -	29	70·0	+2·6	29	70·5	−0·7
June - - - -	18	70·9	+4·6	21	65·0	−3·9
July - - - -	31	70·8	−2·5	23	61·1	−0·9
August - - - -	30	75·7	−0·6	—	—	—
September - - -	9	81·0	+2·9	12	83·1	−0·4
October - - - -	23	86·9	+1·9	21	86·2	−2·4
November - - -	29	86·7	+1·9	24	87·2	0·0
December - - - -	26	89·0	+0·5	29	88·1	−3·8

TABLE VI_S.

SHOWING EXTREME VARIATIONS of the HUMIDITY at 20 feet from that at the LOWER STATION at 4 feet, at 9 a.m.

Months.	1867.		1868.	
	Positive.	Negative.	Positive.	Negative.
January - - -	+ 6	− 5	+18	− 4
February - - -	+ 3	−14	+12	− 7
March - - -	+ 4	−14	+ 3	−10
April - - - -	+ 9	−10	+ 5	−11
May - - - -	+10	− 4	+15	−12
June - - - -	+14	− 6	+ 7	−12
July - - - -	+ 5	− 9	+11	− 9
August - - -	+ 6	− 9	—	—
September - - -	+11	− 5	+ 7	− 6
October - - -	+13	− 6	+ 7	−12
November - - -	+16	−10	+ 9	−10
December - - -	+ 8	− 8	0	− 7

APPENDIX IV.

COMPARISON of the RESULTS obtained by means of the HARMONIC ANALYSER with SIMILAR RESULTS got from MEASUREMENT and NUMERICAL CALCULATION.

THE hourly values of the Meteorological elements recorded at the seven self-recording observatories, which are published by the Office, are obtained by drawing lines on the photograms corresponding to the several hours, measuring the ordinates and reducing them by the proper scale. From the published numbers the hourly means for the several observatories and the several months separately have been calculated for the year 187~~4~~ by Mr. Eaton, who has kindly placed his results 6/
at the disposal of the Meteorological Council. Advantage has been taken of this circumstance to institute a more searching comparison between the results obtained by the machine and those got by calculation than had previously been possible from the available data.

It is true that the results would not be rigorously identical even if the processes could be carried out with mathematical accuracy. For the process of measurement and calculation takes no account of the values of the elements except at the exact hours, and could therefore only lead to an interpolation curve agreeing with the actual curve for a series of equidistant abscissæ, whereas the machine performs an actual integration, and would therefore theoretically be competent to give the exact values of the coefficients of the leading terms in the Harmonic expression for the element. On the other hand, the manipulation of the machine cannot practically be carried out to quite the same degree of exactness as laying down and measuring a number of equidistant ordinates.

An estimate may be formed of the degree of reliance which may be placed on the results obtained by the process of measurement and calculation, by deducing the coefficients from the odd and even hours separately. Of course the coefficients obtained by taking the even or odd hours alone would not be so good as those deduced from the whole 24, which would be the means of the two former. But if the results obtained should indicate that the difference between the coefficients got by odd and even hours is due, at least in the main, to casual fluctuations of element under discussion, a simple application of the doctrine of chances will indicate the degree of reliance to be placed on the coefficients obtained by using the whole 24.

These coefficients can then be compared with those obtained by using the machine, and the numbers got by means of the instrument can thus be checked.

In the following pages the upper table on each page gives the seven constants in the Harmonic expression (carried to the third order) for the temperature of the air, as a periodic function of the time of day as determined by the machine, and the under table the approximate expressions for the same constants as got in the usual way from the odd hours and even hours separately, and the mean of the two. For the convenience of the reader the differences between the constants for the odd and the even hours, and the differences between the means of these and the constants by the machine, are collected in a subsequent table, where they are arranged so as to bring together the numbers relating to the same constant.

A result which comes out incidentally to the comparison which is the main object of the investigation is, that the differences between the constants by odd and by even hours are not wholly casual. This is more especially noticeable in the mean, and in the first of the two terms of the first order. Thus in the mean the average defect in the result by even hours relatively to the result by odd is about 0·05. This is not to be accounted for by a difference of temperature at the beginning and end of a month, which on account of the difference of an hour in the mean epoch for even and odd hours would make a theoretical difference in the means calculated from the two separately. For in the first place the effect would be too small; thus for a difference of 10° at the beginning and end of a month of 30 days it would be only 10° ÷ 23 × 30, or little more than the hundredth of a degree; and in the second place it would produce a discrepancy sometimes of one sign, sometimes of the other, according to the season. Nor again does it seem to be referable to the changing of the papers at 10 a.m., rendering possibly the 10 a.m. reading less accurate than the others, in a manner which might conceivably have an average bias in one direction. For in the first place an error of 0·05 in the mean of 12 hours, if it arose from an error at a single hour, would imply an error of 0·6 in a constant direction for the reading at that hour, corresponding to about 0·06 inch on the photogram, which is larger than seems at all probable; and in the second place, if this were the cause, there ought to be a relation between the differences, as got from odd and even hours, of the other coefficients, which does not seem to be followed. An error of 0·5 in A, if it arose from an error in the 10 a.m. reading, would entail in a_1, b_1, a_2, b_2, a_3, b_3, the errors—

0°·1 cos. 150°, 0°·1 sin. 150°, 0°·1 cos. 300°, 0°·1 sin. 300°, 0°·1 cos. 450°, 0°·1 sin. 450°,
or, − 0°·87, + 0°·50, + 0°·50, − 0°·87, 0°·00, + 0°·10.

But the errors which in the table of comparison appear in some cases to emerge from mere casual discrepancies do not appear to agree with the above law.

It appears, therefore, that the differences between the result got by odd and even hours, in so far as they are methodical, have their origin in the nature of the function expressing the average temperature as depending on the time of day. That there should be some such stated, though small differences, appears very likely *a priori* from the known theory of periodic series. We know that a finite, but otherwise arbitrary periodic function may be expanded in a series of sines and cosines of the variable and its multiples; but the rapidity of the convergence depends materially upon the character of the function. If the function or its derivatives change discontinuously, slowness of ultimate convergence is occasioned thereby, though the convergence may be rapid at first. Now, sunrise and sunset introduce a discontinuity into the law of change of the temperature with the time, one law applying to day and another to night. We might expect, therefore, that the coefficients of high orders, though small, would not converge rapidly. But supposing the whole period divided into 12 equal intervals, the process which is deemed to give A, gives in reality—

$$A + a_{12} + a_{24} + a_{36} + \ldots$$

Similarly the process which is deemed to give a_1, gives really—

$$a_1 + a_{13} + a_{25} + \ldots$$

And so in other cases. If, therefore, the coefficients of the 12th and higher orders, though small, be not insensible, the coefficients got by the well-known process will be subject to small but not insensible errors.

Dismissing now the further consideration of system in the differences between the values of the constants got by odd and even hours, and treating the differences as purely casual, we see from the numbers in the last column, each of which has of course to be divided by 12 to get the mean, that the average discrepancy between the results of odd and even hours, taking one observatory with another, and one constant with another, is about 0·052. Treating the results from odd and even hours as worthy of equal credit, this would give for the average error of either 0·036, and for that of the mean of the two 0·026. Subject therefore to an error comparable with this, we may take the mean from odd and even hours as a standard whereby to test the numbers obtained by the machine.

The differences between the constants got by the machine and the mean of those got by calculation from the odd and even hours is given in a subsequent table, arranged precisely like the former.

On inspecting the numbers in the last three columns of this table, we notice in the first place considerably more distinct indications of system in the errors than in the case of the comparison of odd and even hours. This is more especially the case with the pair of constants of the first order a_1 and b_1. That the errors should show some sort of system, is only what might be expected, since any slight mechanical inaccuracy in the train of machinery working the cylinders, or any slight bias in the operator's mode of passing the sheets through the machine and following them with the pointer, would be liable to produce systematic errors. In so far as the errors are systematic, they would admit of correction by investigating their law and determining certain coefficients. But practically the errors referable to the machine itself and the operator's manipulation of it are so small, that it seems hardly worth while to make such corrections.

In the Glasgow photograms, a slight change of scale, consequent on re-focussing, took place in March 1876, which was not detected till after the publication of the hourly means; which accounts for the numbers in this table for A, January and February, being greater than usual. The sums have therefore been omitted. In determining the absolute temperature, the change of scale would affect the interval between the photographic curve and the fiducial line, an interval representing say 20° or so. But the diurnal range in winter is so small that the change would not sensibly affect the coefficients of the variable terms, so that the sums are not omitted in the case of those coefficients.

Disregarding now the systematic character of some of the errors, and treating them as purely casual, we get as the average difference between the constants as got by the machine and by calculation from the 24 hourly means 0·065. It may be noticed, however, that the numbers are unusually large (and at the same time very decidedly systematic) in the case of the second cylinder of the first order, for which the average is as much as 0·125, the eighth of a degree. If b_1 be omitted, the average for the remaining cylinders of the machine is reduced to 0·047.

We see, therefore, that with the exception perhaps of b_1, the constants got by the machine for the mean of the days constituting a month are as accurate as those got by calculation, which requires considerably more time, inasmuch as the hourly lines have to be drawn on the photograms, then measured, then meaned, and the constants deduced from the means by a numerical process by no means very short.

GREENWICH TIME.

DRY BULB CURVES.

HARMONIC CONSTANTS for TEMPERATURE for the Year 1876 for the SEVEN OBSERVATORIES.

VALENCIA.—INSTRUMENTAL.

—	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
A -	45°·90	46°·68	44°·03	48°·50	51°·84	55°·08	59°·69	60°·10	55°·90	53°·98	50°·01	47°·32
a_1 - -	−0·77	−0·99	−1·71	−1·82	−3·98	−2·76	−3·16	−2·42	−1·74	−1·32	−1·16	−0·71
b_1 - -	−0·59	−0·78	−1·50	−1·74	−3·08	−1·87	−2·35	−1·80	−1·08	−0·84	−0·54	−0·88
a_2 - -	+0·31	+0·39	+0·47	+0·43	+0·29	+0·16	+0·23	+0·25	+0·37	+0·48	+0·55	+0·39
b_2 - -	+0·64	+0·83	+0·41	+0·46	+0·33	+0·23	+0·33	+0·42	+0·54	+0·61	+0·52	+0·52
a_3 - -	−0·08	−0·12	−0·06	+0·13	+0·27	+0·16	+0·15	+0·14	+0·07	−0·08	+0·02	−0·09
b_3 - -	−0·27	−0·06	+0·15	+0·10	+0·48	+0·21	+0·40	+0·21	+0·03	−0·05	−0·22	−0·23

VALENCIA.—CALCULATION.

—	Hours.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
A	Odd	45°·72	46°·52	43°·99	48°·52	51°·92	55°·39	59°·73	60°·24	55°·97	54°·02	49°·73	46°·95
,,	Even	45·71	46·45	43·87	48·46	51·86	55·38	59·78	60·09	55·91	54·00	49·77	46·97
,,	Mean	45·71	46·48	43·93	48·49	51·89	55·38	59·75	60·16	55·94	54·01	49·75	46·96
a_1	Odd	− ·72	− ·87	− 1·60	− 1·80	− 3·91	− 2·69	− 3·11	− 2·37	− 1·71	− 1·30	− 1·14	− ·59
,,	Even	− ·67	− ·98	− 1·55	− 1·72	− 3·90	− 2·58	− 3·05	− 2·22	− 1·68	− 1·24	− 1·10	− ·60
,,	Mean	− ·70	− ·93	− 1·57	− 1·76	− 3·91	− 2·63	− 3·08	− 2·29	− 1·69	− 1·27	− 1·12	− ·59
b_1	Odd	− ·61	− ·86	− 1·54	− 1·89	− 3·33	− 1·98	− 2·35	− 1·83	− 1·19	− ·89	− ·64	− ·98
,,	Even	− ·60	− ·85	− 1·59	− 1·83	− 3·28	− 1·97	− 2·48	− 1·85	− 1·15	− ·93	− ·65	− ·98
,,	Mean	− ·60	− ·86	− 1·57	− 1·86	− 3·30	− 1·98	− 2·42	− 1·84	− 1·17	− ·91	− ·65	− ·98
a_2	Odd	+ ·33	+ ·30	+ ·46	+ ·40	+ ·27	+ ·14	+ ·23	+ ·17	+ ·36	+ ·43	+ ·59	+ ·37
,,	Even	+ ·33	+ ·35	+ ·38	+ ·41	+ ·37	+ ·09	+ ·18	+ ·30	+ ·35	+ ·47	+ ·57	+ ·37
,,	Mean	+ ·33	+ ·33	+ ·42	+ ·41	+ ·32	+ ·12	+ ·21	+ ·24	+ ·36	+ ·45	+ ·58	+ ·37
b_2	Odd	+ ·59	+ ·67	+ ·35	+ ·40	+ ·25	+ ·15	+ ·20	+ ·30	+ ·52	+ ·57	+ ·49	+ ·50
,,	Even	+ ·65	+ ·75	+ ·30	+ ·42	+ ·27	+ ·13	+ ·29	+ ·35	+ ·46	+ ·49	+ ·61	+ ·43
,,	Mean	+ ·62	+ ·71	+ ·33	+ ·41	+ ·26	+ ·14	+ ·25	+ ·32	+ ·49	+ ·53	+ ·55	+ ·47
a_3	Odd	− ·12	− ·08	− ·08	+ ·11	+ ·26	+ ·20	+ ·17	+ ·13	+ ·05	− ·13	·00	− ·17
,,	Even	− ·05	− ·13	− ·15	+ ·12	+ ·22	+ ·07	+ ·13	+ ·18	+ ·10	− ·08	+ ·05	− ·07
,,	Mean	− ·08	− ·11	− ·12	+ ·11	+ ·24	+ ·13	+ ·15	+ ·16	+ ·07	− ·11	+ ·02	− ·12
b_3	Odd	− ·28	− ·04	+ ·03	+ ·06	+ ·42	+ ·18	+ ·35	+ ·15	+ ·05	− ·06	− ·26	− ·31
,,	Even	− ·23	− ·10	+ ·15	+ ·10	+ ·47	+ ·17	+ ·40	+ ·17	+ ·02	− ·02	− ·17	− ·22
,,	Mean	− ·26	− ·07	+ ·09	+ ·08	+ ·45	+ ·17	+ ·38	+ ·16	+ ·03	− ·04	− ·21	− ·26

ARMAGH.—INSTRUMENTAL.

——	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
A	41°·17	40°·00	38°·73	45°·36	49°·99	55°·13	59°·43	58°·10	52°·94	51°·47	43°·82	42°·50
a_1	−0·65	−1·46	−2·14	−3·18	−4·38	−3·99	−4·33	−4·00	−2·59	−1·52	−0·70	−0·47
b_1	−0·94	−1·26	−1·95	−2·72	−3·93	−3·44	−4·14	−3·75	−2·16	−0·73	−1·50	−0·83
a_2	+0·26	+0·54	+0·64	+0·55	+0·46	+0·31	+0·29	+0·57	+0·77	+0·56	+0·57	+0·26
b_2	+0·55	+0·87	+0·80	+0·44	+0·03	+0·06	+0·57	+0·47	+0·73	+0·86	+0·52	+0·36
a_3	−0·06	−0·20	−0·01	+0·04	+0·09	+0·28	+0·07	+0·13	−0·06	−0·06	−0·22	−0·24
b_3	−0·30	−0·16	+0·04	+0·31	+0·63	+0·32	+0·38	+0·51	+0·15	−0·08	−0·29	−0·21

ARMAGH.—CALCULATION.

—	Hours.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
A	Odd	41°·17	40°·06	38°·76	45°·42	50°·04	55°·14	59°·52	58°·13	52°·88	51°·61	43°·96	42°·63
"	Even	41·15	40·06	38·67	45·41	50·02	55·11	59·38	58·08	52·85	51·45	43·91	42·59
"	Mean	41·16	40·06	38·71	45·42	50·03	55·13	59·45	58·10	52·87	51·53	43·94	42·61
a_1	Odd	− ·58	− 1·44	− 2·01	− 3·07	− 4·37	− 3·98	− 4·28	− 3·93	− 2·59	− 1·57	− ·69	− ·46
"	Even	− ·62	− 1·49	− 2·04	− 3·09	− 4·26	− 3·84	− 4·26	− 3·88	− 2·53	− 1·50	− ·61	− ·45
"	Mean	− ·60	− 1·46	− 2·03	− 3·08	− 4·31	− 3·91	− 4·27	− 3·91	− 2·56	− 1·54	− ·65	− ·46
b_1	Odd	− 1·04	− 1·30	− 2·04	− 2·78	− 4·16	− 3·63	− 4·27	− 3·71	− 2·34	− ·81	− 1·56	− ·89
"	Even	− 1·04	− 1·39	− 2·10	− 2·84	− 4·14	− 3·62	− 4·33	− 3·72	− 2·32	− ·86	− 1·59	− ·92
"	Mean	− 1·04	− 1·34	− 2·07	− 2·81	− 4·15	− 3·62	− 4·30	− 3·72	− 2·33	− ·84	− 1·58	− ·90
a_2	Odd	+ ·27	+ ·55	+ ·62	+ ·51	+ ·38	+ ·35	+ ·27	+ ·51	+ ·82	+ ·61	+ ·56	+ ·26
"	Even	+ ·32	+ ·57	+ ·60	+ ·55	+ ·54	+ ·38	+ ·24	+ ·62	+ ·78	+ ·56	+ ·57	+ ·25
"	Mean	+ ·30	+ ·56	+ ·61	+ ·53	+ ·46	+ ·36	+ ·26	+ ·56	+ ·80	+ ·58	+ ·56	+ ·25
b_2	Odd	+ ·53	+ ·83	+ ·76	+ ·36	− ·03	+ ·02	+ ·50	+ ·44	+ ·69	+ ·83	+ ·47	+ ·33
"	Even	+ ·49	+ ·87	+ ·69	+ ·43	+ ·07	+ ·00	+ ·53	+ ·49	+ ·66	+ ·77	+ ·52	+ ·35
"	Mean	+ ·51	+ ·85	+ ·73	+ ·40	+ ·02	+ ·01	+ ·52	+ ·47	+ ·68	+ ·80	+ ·50	+ ·34
a_3	Odd	− ·07	− ·29	− ·06	+ ·04	+ ·01	+ ·22	+ ·07	+ ·14	− ·12	− ·11	− ·25	− ·24
"	Even	− ·05	− ·23	− ·05	+ ·00	+ ·02	+ ·17	+ ·00	+ ·05	− ·10	− ·10	− ·17	− ·27
"	Mean	− ·06	− ·26	− ·05	+ ·02	+ ·01	+ ·20	+ ·04	+ ·10	− ·11	− ·10	− ·21	− ·25
b_3	Odd	− ·33	− ·13	+ ·06	+ ·34	+ ·60	+ ·32	+ ·40	+ ·49	+ ·16	− ·11	− ·32	− ·21
"	Even	− ·28	− ·22	+ ·07	+ ·25	+ ·62	+ ·32	+ ·35	+ ·48	+ ·10	− ·07	− ·32	− ·22
"	Mean	− ·31	− ·17	+ ·06	+ ·30	+ ·61	+ ·32	+ ·38	+ ·49	+ ·13	− ·09	− ·32	− ·21

GLASGOW.—INSTRUMENTAL.

—	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
A - -	39°·38	37°·03	37°·81	44°·05	49°·59	55°·42	57°·72	57°·65	52°·00	50°·26	40°·41	40°·90
a_1 - -	−0·61	−1·24	−1·76	−3·05	−4·29	−4·70	−3·95	−3·89	−3·06	−1·60	−0·91	−0·32
b_1 - -	−0·77	−1·23	−1·67	−2·66	−4·29	−3·87	−3·10	−3·36	−2·80	−0·91	−1·02	−0·37
a_2 - -	+0·27	+0·43	+0·69	+0·52	+0·01	−0·13	+0·02	+0·45	+0·84	+0·35	+0·21	+0·29
b_2 - -	+0·39	+0·92	+0·31	+0·40	+0·48	+0·06	+0·16	+0·56	+0·67	+0·45	+0·59	+0·17
a_3 - -	−0·06	−0·02	+0·04	+0·14	+0·45	+0·28	+0·41	+0·21	+0·13	−0·11	−0·05	−0·04
b_3 - -	−0·03	−0·21	+0·12	+0·19	+0·36	+0·46	+0·43	+0·36	+0·25	−0·08	−0·16	−0·16

GLASGOW.—CALCULATION.

—	Hours.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
A	Odd	40°·60	37°·45	38°·08	44°·22	49°·71	55°·52	57°·80	57°·73	52°·16	50°·40	40°·56	41°·02
,,	Even	40·53	37·41	38·04	44·15	49·62	55·50	57·70	57·70	52·06	50·42	40·52	40·94
,,	Mean	40·56	37·43	38·06	44·18	49·66	55·51	57·75	57·71	52·11	50·41	40·54	40·98
a_1	Odd	− ·60	− 1·20	− 1·74	− 2·92	− 4·17	− 4·68	− 3·95	− 3·84	− 2·95	− 1·50	− ·89	− ·27
,,	Even	− ·52	− 1·23	− 1·54	− 2·87	− 4·17	− 4·47	− 3·86	− 3·71	− 2·99	− 1·49	− ·85	− ·27
,,	Mean	− ·56	− 1·21	− 1·69	− 2·90	− 4·17	− 4·58	− 3·90	− 3·77	− 2·97	− 1·50	− ·87	− ·27
b_1	Odd	− ·80	− 1·28	− 1·75	− 2·77	− 4·49	− 3·98	− 3·19	− 3·42	− 2·92	− ·92	− 1·10	− ·42
,,	Even	− ·79	− 1·26	− 1·74	− 2·79	− 4·44	− 3·98	− 3·22	− 3·42	− 2·87	− ·94	− 1·07	− ·43
,,	Mean	− ·80	− 1·27	− 1·75	− 2·78	− 4·46	− 3·98	− 3·21	− 3·42	− 2·90	− ·93	− 1·08	− ·43
a_2	Odd	+ ·25	+ ·46	+ ·64	+ ·58	− ·03	− ·19	− ·04	+ ·43	+ ·81	+ ·37	+ ·20	+ ·33
,,	Even	+ ·26	+ ·38	+ ·65	+ ·49	− ·03	− ·13	− ·05	+ ·47	+ ·80	+ ·37	+ ·22	+ ·27
,,	Mean	+ ·25	+ ·42	+ ·64	+ ·53	− ·03	− ·16	− ·05	+ ·45	+ ·80	+ ·37	+ ·21	+ ·30
b_2	Odd	+ ·40	+ ·93	+ ·27	+ ·32	+ ·50	+ ·04	+ ·17	+ ·47	+ ·62	+ ·37	+ ·57	+ ·14
,,	Even	+ ·39	+ ·85	+ ·29	+ ·33	+ ·46	+ ·01	+ ·03	+ ·52	+ ·55	+ ·48	+ ·52	+ ·19
,,	Mean	+ ·39	+ ·89	+ ·28	+ ·32	+ ·48	+ ·03	+ ·10	+ ·49	+ ·58	+ ·42	+ ·54	+ ·16
a_3	Odd	− ·07	− ·02	+ ·02	+ ·05	+ ·46	+ ·28	+ ·42	+ ·17	+ ·11	− ·17	− ·04	− ·03
,,	Even	− ·02	− ·07	+ ·00	+ ·13	+ ·43	+ ·23	+ ·30	+ ·27	+ ·08	− ·13	− ·07	− ·03
,,	Mean	− ·04	− ·05	+ ·01	+ ·09	+ ·45	+ ·26	+ ·36	+ ·22	+ ·09	− ·15	− ·05	− ·03
b_3	Odd	− ·05	− ·16	+ ·12	+ ·21	+ ·32	+ ·45	+ ·42	+ ·35	+ ·24	− ·12	− ·18	− ·22
,,	Even	− ·02	− ·18	+ ·12	+ ·23	+ ·35	+ ·40	+ ·43	+ ·33	+ ·23	− ·08	− ·15	− ·18
,,	Mean	− ·03	− ·17	+ ·12	+ ·22	+ ·33	+ ·42	+ ·43	+ ·34	+ ·24	− ·10	− ·16	− ·20

ABERDEEN.—INSTRUMENTAL.

—	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
A	39°·33	36°·95	37°·38	42°·89	47°·80	54°·22	58°·16	55°·98	50°·97	49°·39	42°·08	40°·56
a_1	−0·93	−1·22	−1·67	−2·38	−3·37	−4·77	−3·51	−3·90	−2·20	−1·67	−0·58	−0·28
b_1	−1·01	−0·55	−1·58	−1·49	−1·79	−2·37	−2·78	−2·67	−1·10	−1·07	−0·74	0·00
a_2	+0·37	+0·47	+0·46	+0·40	+0·21	+0·11	+0·06	+0·50	+0·42	+0·61	+0·36	+0·18
b_2	+0·41	+0·60	+0·39	+0·19	−0·27	−0·49	−0·02	−0·32	+0·44	+0·54	+0·36	+0·27
a_3	−0·09	−0·12	0·00	+0·11	+0·34	+0·39	+0·28	+0·30	0·00	−0·17	−0·11	−0·13
b_3	−0·26	−0·16	−0·16	+0·30	+0·15	+0·02	+0·12	+0·43	+0·17	−0·01	−0·07	−0·01

ABERDEEN.—CALCULATION.

—	Hours.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
A	Odd	39°·21	36°·87	37°·26	42°·85	47°·72	54°·20	58°·25	55°·92	50°·82	49°·33	42°·02	40°·53
”	Even	39·19	36·84	37·23	42·75	47·72	54·22	57·97	55·89	50·76	49·26	42·02	40·51
”	Mean	39·20	36·86	37·24	42·80	47·72	54·21	58·11	55·90	50·79	49·30	42·02	40·52
a_1	Odd	− ·91	− 1·28	− 1·73	− 2·27	− 3·34	− 4·64	− 3·45	− 3·84	− 2·19	− 1·61	− ·50	− ·24
”	Even	− ·92	− 1·25	− 1·60	− 2·27	− 3·24	− 4·67	− 3·30	− 3·83	− 2·13	− 1·63	− ·48	− ·29
”	Mean	− ·92	− 1·26	− 1·66	− 2·27	− 3·29	− 4·66	− 3·37	− 3·83	− 2·16	− 1·62	− ·49	− ·26
b_1	Odd	− 1·19	− ·75	− 1·70	− 1·64	− 1·95	− 2·64	− 2·91	− 2·79	− 1·17	− 1·19	− ·80	− ·13
”	Even	− 1·10	− ·73	− 1·74	− 1·62	− 2·02	− 2·58	− 2·85	− 2·92	− 1·27	− 1·16	− ·89	− ·13
”	Mean	− 1·15	− ·74	− 1·72	− 1·63	− 1·99	− 2·61	− 2·88	− 2·85	− 1·22	− 1·17	− ·84	− ·13
a_2	Odd	+ ·40	+ ·51	+ ·40	+ ·19	+ ·16	− ·04	+ ·04	+ ·49	+ ·42	+ ·65	+ ·39	+ ·14
”	Even	+ ·38	+ ·43	+ ·50	+ ·40	+ ·32	+ ·20	+ ·02	+ ·47	+ ·41	+ ·58	+ ·40	+ ·12
”	Mean	+ ·39	+ ·47	+ ·45	+ ·29	+ ·24	+ ·08	+ ·03	+ ·48	+ ·41	+ ·61	+ ·39	+ ·13
b_2	Odd	+ ·41	+ ·52	+ ·35	+ ·16	− ·31	− ·54	− ·07	− ·38	+ ·44	+ ·44	+ ·27	+ ·23
”	Even	+ ·48	+ ·66	+ ·37	+ ·14	− ·36	− ·52	− ·17	− ·35	+ ·39	+ ·53	+ ·37	+ ·29
”	Mean	+ ·44	+ ·58	+ ·36	+ ·15	− ·33	− ·53	− ·12	− ·36	+ ·42	+ ·49	+ ·32	+ ·26
a	Odd	− ·15	− ·18	− ·01	+ ·09	+ ·34	+ ·38	+ ·24	+ ·32	− ·01	− ·21	− ·12	− ·17
”	Even	− ·03	− ·17	+ ·05	+ ·07	+ ·33	+ ·25	+ ·20	+ ·35	− ·05	− ·23	− ·08	− ·13
”	Mean	− ·09	− ·17	+ ·02	+ ·08	+ ·34	+ ·31	+ ·22	+ ·33	− ·03	− ·22	− ·10	− ·15
b_3	Odd	− ·32	− ·24	− ·01	+ ·28	+ ·18	− ·02	+ ·07	+ ·41	+ ·15	·00	− ·12	− ·14
”	Even	− ·28	− ·25	− ·15	+ ·23	+ ·07	− ·10	+ ·23	+ ·43	+ ·17	− ·02	− ·03	− ·02
”	Mean	− ·30	− ·24	− ·08	+ ·26	+ ·12	− ·06	+ ·15	+ ·42	+ ·16	− ·01	− ·08	− ·08

FALMOUTH.—INSTRUMENTAL.

—	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
A - -	42°·72	45°·57	43°·55	47°·77	50°·62	56°·79	62°·85	61°·42	56°·65	54°·31	48°·90	48°·08
a_1 - -	−0·75	−1·20	−1·41	−2·53	−3·06	−3·83	−3·75	−2·84	−1·77	−1·09	−1·14	−0·89
b_1 - -	−0·94	−0·70	−0·86	−1·46	−2·25	−1·91	−1·90	−1·65	−0·90	−0·50	−0·86	−0·38
a_2 - -	+0·34	+0·54	+0·21	+0·54	+0·51	+0·47	+0·42	+0·46	+0·65	+0·51	+0·61	+0·32
b_2 - -	+0·54	+0·40	+0·47	+0·21	0·00	−0·20	+0·04	+0·35	+0·35	+0·34	+0·43	+0·37
a_3 - -	−0·16	−0·05	+0·05	+0·14	+0·39	+0·34	+0·27	+0·27	−0·06	−0·08	−0·20	−0·09
b_3 - -	−0·18	−0·12	+0·12	+0·32	+0·41	+0·44	+0·42	+0·29	+0·17	+0·07	−0·13	−0·02

FALMOUTH.—CALCULATION.

—	Hours.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
A	Odd	42°·62	45°·47	43°·57	47°·93	50°·85	57°·02	63°·02	61°·47	56°·69	54°·36	48°·99	48°·19
„	Even	42·59	45·46	43·50	47·83	50·72	56·91	62·87	61·36	56·59	54·28	48·92	48·07
„	Mean	42·60	45·46	43·53	47·88	50·78	56·96	62·94	61·41	56·64	54·32	48·95	48·13
a_1	Odd	− ·66	− 1·11	− 1·34	− 2·47	− 3·09	− 3·84	− 3·77	− 2·82	− 1·79	− 1·10	− 1·15	− ·85
„	Even	− ·66	− 1·13	− 1·39	− 2·43	− 2·95	− 3·77	− 3·63	− 2·73	− 1·73	− 1·10	− 1·07	− ·77
„	Mean	− ·66	− 1·12	− 1·36	− 2·45	− 3·02	− 3·80	− 3·70	− 2·78	− 1·76	− 1·10	− 1·11	− ·81
b_1	Odd	− ·96	− ·76	− ·98	− 1·50	− 2·36	− 1·94	− 1·98	− 1·71	− 1·11	− ·61	− 1·02	− ·46
„	Even	− ·99	− ·73	− ·98	− 1·54	− 2·45	− 2·11	− 2·00	− 1·78	− 1·04	− ·60	− ·99	− ·47
„	Mean	− ·98	− ·74	− ·98	− 1·52	− 2·41	− 2·02	− 1·99	− 1·75	− 1·08	− ·61	− 1·01	− ·47
a_2	Odd	+ ·29	+ ·45	+ ·17	+ ·52	+ ·43	+ ·45	+ ·36	+ ·49	+ ·68	+ ·53	+ ·65	+ ·33
„	Even	+ ·32	+ ·54	+ ·14	+ ·59	+ ·50	+ ·52	+ ·43	+ ·48	+ ·65	+ ·46	+ ·62	+ ·30
„	Mean	+ ·30	+ ·49	+ ·16	+ ·56	+ ·47	+ ·48	+ ·40	+ ·49	+ ·66	+ ·50	+ ·63	+ ·32
b_2	Odd	+ ·50	+ ·36	+ ·43	+ ·22	− ·03	− ·29	− ·01	+ ·35	+ ·29	+ ·31	+ ·39	+ ·37
„	Even	+ ·49	+ ·36	+ ·45	+ ·19	− ·00	− ·23	− ·00	+ ·29	+ ·32	+ ·33	+ ·32	+ ·37
„	Mean	+ ·50	+ ·36	+ ·44	+ ·20	− ·02	− ·26	− ·00	+ ·32	+ ·30	+ ·32	+ ·35	+ ·37
a_3	Odd	− ·13	+ ·04	+ ·05	+ ·12	+ ·40	+ ·32	+ ·24	+ ·21	− ·06	− ·11	− ·22	− ·11
„	Even	− ·15	− ·07	− ·02	+ ·15	+ ·38	+ ·35	+ ·25	+ ·28	− ·07	− ·10	− ·13	− ·13
„	Mean	− ·14	− ·02	+ ·02	+ ·13	+ ·39	+ ·33	+ ·24	+ ·25	− ·06	− ·10	− ·18	− ·12
b_3	Odd	− ·22	− ·15	+ ·12	+ ·35	+ ·40	+ ·44	+ ·40	+ ·21	+ ·13	+ ·11	− ·15	− ·04
„	Even	− ·17	− ·15	+ ·02	+ ·22	+ ·42	+ ·47	+ ·42	+ ·30	+ ·15	+ ·00	− ·12	− ·07
„	Mean	− ·20	− ·15	+ ·07	+ ·29	+ ·41	+ ·45	+ ·41	+ ·26	+ ·14	+ ·05	− ·13	− ·05

STONYHURST.—INSTRUMENTAL.

—	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
A - -	38°·50	39°·65	39°·10	45°·26	48°·74	56°·57	60°·77	59°·20	53°·50	51°·08	42°·15	42°·06
a_1 - -	−0·50	−1·42	−2·08	−3·81	−5·52	−5·39	−4·44	−4·28	−3·20	−2·31	−1·30	−0·60
b_1 - -	−0·78	−1·20	−1·55	−2·62	−3·74	−3·09	−2·88	−3·38	−2·04	−0·84	−1·34	−0·60
a_2 - -	+0·30	+0·42	+0·55	+0·56	+0·14	+0·08	+0·30	+0·57	+0·83	+0·83	+0·91	+0·40
b_2 - -	+0·61	+0·64	+0·67	+0·54	−0·04	−0·31	−0·07	+0·34	+0·56	+0·58	+0·51	+0·48
a_3 - -	−0·03	−0·16	−0·01	+0·20	+0·52	+0·33	+0·22	+0·17	+0·12	−0·08	−0·14	−0·13
b_3 - -	−0·26	−0·15	+0·13	+0·43	+0·56	+0·40	+0·54	+0·33	+0·23	+0·03	−0·22	−0·17

STONYHURST.—CALCULATION.

—	Hours.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
A	Odd	38°·53	39°·68	39°·15	45°·39	48°·78	56°·72	60°·85	59°·22	53°·50	51°·12	42°·17	42°·09
,,	Even	38·49	39·62	39·07	45·33	48·73	56·57	60·77	59·24	53·48	51·05	42·13	42·07
,,	Mean	38·51	39·65	39·11	45·36	48·76	56·64	60·81	59·23	53·49	51·08	42·15	42·08
a_1	Odd	− ·42	− 1·38	− 2·00	− 3·52	− 5·47	− 5·35	− 4·09	− 4·12	− 3·06	− 2·25	− 1·25	− ·55
,,	Even	− ·47	− 1·37	− 1·97	− 3·67	− 5·41	− 5·28	− 4·17	− 4·13	− 3·06	− 2·28	− 1·15	− ·59
,,	Mean	− ·44	− 1·37	− 1·99	− 3·60	− 5·44	− 5·32	− 4·13	− 4·13	− 3·06	− 2·26	− 1·20	− ·57
b_1	Odd	− ·85	− 1·31	− 1·67	− 2·81	− 4·00	− 3·35	− 3·04	− 3·52	− 2·16	− ·97	− 1·43	− ·68
,,	Even	− ·88	− 1·35	− 1·71	− 2·80	− 4·00	− 3·36	− 3·10	− 3·61	− 2·17	− ·98	− 1·50	− ·75
,,	Mean	− ·86	− 1·33	− 1·69	− 2·81	− 4·00	− 3·36	− 3·07	− 3·56	− 2·17	− ·97	− 1·46	− ·72
a_2	Odd	+ ·30	+ ·38	+ ·55	+ ·48	+ ·16	+ ·07	+ ·17	+ ·52	+ ·79	+ ·79	+ ·87	+ ·36
,,	Even	+ ·27	+ ·38	+ ·48	+ ·52	+ ·16	+ ·13	+ ·18	+ ·60	+ ·78	+ ·73	+ ·89	+ ·39
,,	Mean	+ ·28	+ ·38	+ ·52	+ ·50	+ ·16	+ ·10	+ ·18	+ ·56	+ ·79	+ ·76	+ ·88	+ ·38
b_2	Odd	+ ·64	+ ·68	+ ·65	+ ·57	− ·09	− ·29	+ ·02	+ ·32	+ ·52	+ ·59	+ ·50	+ ·39
,,	Even	+ ·58	+ ·58	+ ·66	+ ·51	− ·10	− ·35	+ ·09	+ ·29	+ ·52	+ ·58	+ ·45	+ ·45
,,	Mean	+ ·61	+ ·63	+ ·66	+ ·54	− ·10	− ·32	+ ·05	+ ·30	+ ·52	+ ·58	+ ·47	+ ·42
a_3	Odd	− ·09	− ·16	− ·02	+ ·25	+ ·49	+ ·38	+ ·24	+ ·18	+ ·12	− ·13	− ·16	− ·12
,,	Even	+ ·03	− ·18	− ·05	+ ·18	+ ·45	+ ·32	+ ·17	+ ·13	+ ·13	− ·15	− ·12	− ·13
,,	Mean	− ·03	− ·17	− ·04	+ ·22	+ ·47	+ ·35	+ ·20	+ ·15	+ ·13	− ·14	− ·14	− ·13
b_3	Odd	− ·26	− ·17	+ ·12	+ ·27	+ ·59	+ ·31	+ ·49	+ ·34	+ ·19	+ ·04	− ·24	− ·22
,,	Even	− ·22	− ·15	+ ·15	+ ·45	+ ·55	+ ·38	+ ·45	+ ·32	+ ·27	− ·05	− ·22	− ·20
,,	Mean	− ·24	− ·16	+ ·13	+ ·36	+ ·57	+ ·34	+ ·47	+ ·33	+ ·23	− ·01	− ·23	− ·21

KEW.—INSTRUMENTAL.

—	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
A - -	37°·10	41°·54	41°·70	47°·86	49°·46	59°·08	65°·83	63°·30	56°·01	52°·95	44°·20	44°·53
a_1 - -	−1·30	−1·76	−2·56	−4·31	−5·44	−5·28	−5·49	−5·35	−4·02	−2·77	−2·12	−0·99
b_1 - -	−1·28	−1·65	−1·80	−3·12	−4·59	−4·97	−5·97	−5·18	−2·96	−1·51	−1·56	−0·92
a_2 - -	+0·48	+0·51	+0·61	+0·58	+0·06	+0·06	−0·03	+0·53	+0·92	+1·02	+1·02	+0·36
b_2 - -	+0·73	+0·83	+0·73	+0·56	0·00	+0·19	+0·34	+0·39	+0·88	+1·01	+0·66	+0·20
a_3 - -	−0·18	−0·04	−·006	+0·21	+0·44	+0·32	+0·21	+0·21	+0·10	−0·06	−0·31	−0·05
b_3 - -	−0·21	−0·17	+0·13	+0·44	+0·40	+0·37	+0·68	+0·62	+0·26	+0·07	−0·29	−0·24

KEW.—CALCULATION.

—	Hours.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
A	Odd	37°·09	41°·47	41°·67	47°·87	49°·51	59°·24	65°·87	63°·44	56°·04	52°·96	44°·14	44°·57
„	Even	37·08	41·44	41·59	47·74	49·35	59·14	65·74	63·23	55·96	52·91	44·11	44·48
„	Mean	37·08	41·46	41·63	47·80	49·43	59·19	65·80	63·33	56·00	52·93	44·13	44·53
a_1	Odd	− 1·23	− 1·75	− 2·51	− 4·30	− 5·39	− 5·08	− 5·20	− 5·38	− 3·94	− 2·70	− 2·22	− ·98
„	Even	− 1·26	− 1·71	− 2·49	− 4·22	− 5·21	− 5·02	− 5·12	− 5·20	− 3·90	− 2·73	− 2·05	− ·95
„	Mean	− 1·24	− 1·73	− 2·50	− 4·26	− 5·30	− 5·05	− 5·16	− 5·29	− 3·92	− 2·71	− 2·13	− ·97
b_1	Odd	− 1·48	− 1·80	− 1·98	− 3·25	− 4·85	− 5·25	− 5·87	− 5·41	− 3·14	− 1·64	− 1·60	− 1·07
„	Even	− 1·40	− 1·84	− 1·96	− 3·36	− 4·87	− 5·24	− 5·99	− 5·34	− 3·21	− 1·68	− 1·63	− 1·05
„	Mean	− 1·44	− 1·82	− 1·97	− 3·30	− 4·86	− 5·24	− 5·93	− 5·38	− 3·17	− 1·66	− 1·61	− 1·06
a_2	Odd	+ ·51	+ ·52	+ ·62	+ ·61	+ ·03	+ ·03	·00	+ ·56	+ ·89	+ 1·02	+ 1·02	+ ·35
„	Even	+ ·46	+ ·52	+ ·56	+ ·56	+ ·05	+ ·11	− ·08	+ ·48	+ ·92	+ ·94	+ 1·05	+ ·35
„	Mean	+ ·48	+ ·52	+ ·59	+ ·58	+ ·04	+ ·07	− ·04	+ ·52	+ ·91	+ ·98	+ 1·04	+ ·35
b_2	Odd	+ ·74	+ ·77	+ ·73	+ ·62	·00	+ ·13	+ ·42	+ ·46	+ ·82	+ ·87	+ ·58	+ ·17
„	Even	+ ·71	+ ·87	+ ·65	+ ·65	− ·03	+ ·04	+ ·42	+ ·43	+ ·89	+ ·97	+ ·66	+ ·20
„	Mean	+ ·72	+ ·82	+ ·69	+ ·63	− ·01	+ ·09	+ ·42	+ ·45	+ ·86	+ ·92	+ ·62	+ ·18
a_3	Odd	− ·25	− ·07	− ·07	+ ·14	+ ·34	+ ·22	+ ·22	+ ·27	+ ·01	− ·08	− ·37	− ·07
„	Even	− ·20	− ·05	− ·03	+ ·07	+ ·45	+ ·32	+ ·22	+ ·30	+ ·13	− ·17	− ·32	− ·05
„	Mean	− ·22	− ·06	− ·05	+ ·10	+ ·40	+ ·27	+ ·22	+ ·29	+ ·07	− ·12	− ·34	− ·06
b_3	Odd	− ·24	− ·16	+ ·09	+ ·45	+ ·37	+ ·37	+ ·67	+ ·55	+ ·22	+ ·08	− ·32	− ·26
„	Even	− ·23	− ·20	+ ·05	+ ·38	+ ·42	+ ·33	+ ·60	+ ·60	+ ·15	+ ·05	− ·27	− ·28
„	Mean	− ·24	− ·18	+ ·07	+ ·42	+ ·39	+ ·35	+ ·63	+ ·58	+ ·19	+ ·07	− ·29	− ·27

EXCESS of CONSTANTS by ODD over those by EVEN HOURS in HUNDREDTHS of 1°.

OBSERVATORIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Sums.		
													+	−	Both.
A, or the Mean.															
Valencia -	+ 1	+ 7	+ 12	+ 6	+ 6	+ 1	− 5	+ 15	+ 6	+ 2	− 4	− 2	56	11	67
Armagh -	+ 2	0	+ 9	+ 1	+ 2	+ 3	+ 14	+ 5	+ 3	+ 16	+ 5	+ 4	64	0	64
Glasgow -	+ 7	+ 4	+ 4	+ 7	+ 9	+ 2	+ 10	+ 3	+ 10	− 2	+ 4	+ 8	68	2	70
Aberdeen -	+ 2	+ 3	+ 3	+ 10	0	− 2	+ 28	+ 3	+ 6	+ 7	0	+ 2	64	2	66
Falmouth -	+ 3	+ 1	+ 7	+ 10	+ 13	+ 11	+ 15	+ 11	+ 10	+ 8	+ 7	+ 12	108	0	108
Stonyhurst -	+ 4	+ 6	+ 8	+ 6	+ 5	+ 15	+ 8	− 2	+ 2	+ 7	+ 14	+ 2	67	2	69
Kew - -	+ 1	+ 3	+ 8	+ 13	+ 16	+ 10	+ 13	+ 21	+ 8	+ 5	+ 3	+ 9	110	0	110
a_1, or coefficient of cos. t.															
Valencia -	− 5	+ 11	− 5	− 8	− 1	− 11	− 6	− 15	− 3	− 6	− 4	+ 1	12	64	76
Armagh -	+ 4	+ 5	+ 3	+ 2	− 11	− 14	− 2	− 5	− 6	− 7	− 8	− 1	14	54	68
Glasgow -	− 8	+ 3	− 20	− 5	0	− 21	− 9	− 13	+ 4	− 1	− 4	0	7	81	88
Aberdeen -	+ 1	− 3	− 13	0	− 10	+ 3	− 15	− 1	− 6	+ 2	− 2	+ 5	11	50	61
Falmouth -	0	+ 2	+ 5	− 4	− 14	− 8	− 14	− 9	− 6	0	− 8	− 8	7	71	78
Stonyhurst -	+ 5	− 1	− 3	+ 15	− 6	− 7	+ 8	+ 1	0	+ 3	− 10	+ 4	36	27	63
Kew - -	+ 3	− 4	− 2	− 8	− 19	− 6	− 8	− 18	− 4	+ 3	− 17	− 3	6	89	95
b_1, or coefficient of sin. t.															
Valencia -	− 1	− 1	+ 5	− 6	− 5	− 1	+ 13	+ 2	− 4	+ 4	+ 1	0	25	18	43
Armagh -	0	+ 9	+ 6	+ 6	− 2	− 1	+ 6	+ 1	− 2	+ 5	+ 3	+ 3	39	5	44
Glasgow -	− 1	− 2	− 1	+ 2	− 5	0	+ 3	0	− 5	+ 2	− 3	+ 1	8	17	25
Aberdeen -	− 9	− 2	+ 4	− 2	+ 7	− 6	− 6	+ 13	+ 10	− 3	+ 9	0	43	28	71
Falmouth -	+ 3	− 3	0	+ 4	+ 9	+ 19	+ 2	+ 7	− 7	− 1	− 3	+ 1	45	14	59
Stonyhurst -	+ 3	+ 4	+ 4	− 1	0	+ 1	+ 6	+ 9	+ 1	+ 1	+ 7	+ 7	43	1	44
Kew - -	− 8	+ 4	− 2	+ 11	+ 2	− 1	+ 12	− 7	+ 7	+ 4	+ 3	− 2	43	20	63
a_2, or coefficient of cos. $2t$.															
Valencia -	0	− 5	+ 8	− 1	− 10	+ 5	+ 5	− 13	+ 1	− 4	+ 2	0	21	33	54
Armagh -	− 5	− 2	+ 2	− 4	− 16	− 3	+ 3	− 11	+ 4	+ 5	− 1	+ 1	15	42	57
Glasgow -	− 1	+ 8	− 1	+ 9	0	− 6	+ 1	− 4	+ 1	0	− 2	+ 6	25	14	39
Aberdeen -	+ 2	+ 8	− 10	− 21	− 16	− 24	+ 2	+ 1	+ 1	+ 7	− 1	+ 2	23	72	95
Falmouth -	− 3	− 9	+ 3	− 7	− 7	− 7	− 7	+ 1	+ 3	+ 7	+ 3	+ 3	20	40	60
Stonyhurst -	+ 3	0	− 3	− 4	0	− 6	− 1	− 8	+ 1	+ 6	− 2	− 3	10	27	37
Kew - -	+ 5	0	+ 6	+ 5	− 2	− 8	+ 8	+ 8	− 3	+ 8	− 3	0	40	16	56
b_2, or coefficient of sin. $2t$.															
Valencia -	− 6	− 8	+ 5	− 2	− 2	+ 2	− 9	− 5	+ 6	+ 8	− 12	+ 7	28	44	72
Armagh -	+ 4	− 4	+ 7	− 8	− 10	+ 2	− 3	− 5	+ 3	+ 6	− 5	− 2	22	37	59
Glasgow -	+ 1	+ 8	− 2	− 1	+ 4	+ 3	+ 14	− 5	+ 7	− 13	+ 5	− 5	42	24	66
Aberdeen -	− 7	− 6	− 2	+ 2	+ 5	− 2	+ 10	− 3	+ 5	− 9	− 10	− 6	22	45	67
Falmouth -	+ 1	0	− 2	+ 3	− 3	− 6	− 1	+ 6	− 3	− 2	+ 7	0	17	17	34
Stonyhurst -	+ 6	+ 10	− 1	+ 6	+ 1	+ 6	− 7	+ 3	0	+ 1	+ 5	− 6	38	14	52
Kew - -	+ 3	− 10	+ 8	− 3	+ 3	− 1	0	+ 3	− 7	− 10	− 8	− 3	17	42	59
a_3, or coefficient of cos. $3t$.															
Valencia -	− 7	+ 5	+ 7	− 1	+ 4	+ 13	+ 4	− 5	− 5	− 5	− 5	− 10	33	38	71
Armagh -	− 2	− 6	− 1	+ 4	− 1	+ 5	+ 7	+ 9	− 2	− 1	− 8	+ 3	28	21	49
Glasgow -	− 5	+ 5	+ 2	− 8	+ 3	+ 5	+ 12	− 10	+ 3	− 4	+ 4	0	34	27	61
Aberdeen -	− 12	− 1	− 6	+ 2	+ 1	+ 13	+ 4	− 3	+ 4	+ 2	− 4	− 4	26	31	57
Falmouth -	+ 2	+ 3	+ 7	− 3	+ 2	− 3	− 1	− 7	+ 1	− 1	− 9	+ 2	17	24	41
Stonyhurst -	− 12	+ 2	+ 3	+ 7	+ 4	+ 6	+ 7	+ 5	− 1	+ 2	− 4	+ 1	37	17	54
Kew - -	− 5	− 2	− 4	+ 7	− 9	− 10	0	− 3	− 12	+ 9	− 5	− 2	16	52	68
b_3, or coefficient of sin. $3t$.															
Valencia -	− 5	+ 7	− 11	− 4	− 5	+ 1	− 5	− 2	+ 3	− 4	− 9	− 9	11	54	65
Armagh -	− 5	+ 9	− 1	+ 9	− 2	0	+ 5	+ 1	+ 6	− 4	0	− 1	31	12	43
Glasgow -	− 3	+ 2	0	− 2	− 3	+ 5	− 1	+ 2	+ 1	− 4	− 3	− 4	10	20	30
Aberdeen -	− 4	+ 1	+ 14	+ 5	+ 11	+ 8	+ 16	− 2	− 2	+ 2	− 9	− 12	57	29	86
Falmouth -	− 5	0	+ 10	+ 13	− 2	− 3	− 2	− 9	− 2	+ 11	− 3	+ 3	37	26	63
Stonyhurst -	− 4	− 2	− 4	− 18	+ 4	− 7	+ 4	+ 2	− 8	+ 9	− 2	− 2	19	47	66
Kew - -	− 1	+ 4	+ 4	+ 7	− 5	+ 4	+ 7	− 5	+ 7	+ 3	− 5	+ 2	38	16	54

EXCESS of CONSTANTS by MACHINE over MEAN of O and E, in HUNDREDTHS of 1°.

A, or the Mean.

OBSERVATORIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Sums.		
													+	−	Both.
Valencia -	+ 19	+ 20	+ 10	+ 1	− 5	− 30	− 6	− 6	− 4	− 3	+ 26	+ 36	112	54	166
Armagh -	+ 1	− 6	+ 2	− 6	− 4	0	− 2	0	+ 7	− 6	− 12	− 11	10	47	57
Glasgow -	− 118	− 40	− 25	− 13	− 7	− 9	− 3	− 6	− 11	− 15	− 13	− 8	?	?	?
Aberdeen -	+ 13	+ 9	+ 14	+ 9	+ 8	+ 1	+ 5	+ 8	+ 8	+ 9	+ 6	+ 4	94	0	94
Falmouth -	+ 12	+ 11	+ 2	− 11	− 16	− 17	− 9	+ 1	+ 1	− 1	− 5	− 5	27	64	91
Stonyhurst -	− 1	0	− 1	− 10	− 2	− 7	− 4	− 3	+ 1	0	0	− 2	1	30	31
Kew - -	+ 2	+ 8	+ 7	+ 6	+ 3	− 11	+ 3	− 3	+ 1	+ 2	+ 7	0	39	14	53

a_1, or coefficient of cos. *t*.

OBSERVATORIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	+	−	Both.
Valencia -	− 7	− 6	− 14	− 6	− 7	− 13	− 8	− 13	− 5	− 5	− 4	− 12	0	100	100
Armagh -	− 5	0	− 11	− 10	− 7	− 8	− 6	− 9	− 3	+ 2	− 5	− 1	2	65	67
Glasgow -	− 5	− 3	− 7	− 15	− 12	− 12	− 5	− 12	− 9	− 10	− 4	− 5	0	99	99
Aberdeen -	− 1	+ 4	− 1	− 11	− 8	− 11	− 14	− 7	− 4	− 5	− 9	− 2	4	73	77
Falmouth -	− 9	− 8	− 5	− 8	− 4	− 3	− 5	− 6	− 1	+ 1	− 3	− 8	1	60	61
Stonyhurst -	− 6	− 5	− 9	− 21	− 8	− 7	− 31	− 15	− 14	− 5	− 10	− 3	0	134	134
Kew - -	− 6	− 3	− 6	− 5	− 14	− 23	− 33	− 6	− 10	− 6	+ 1	− 2	1	114	115

b_1, or coefficient of sin. *t*.

OBSERVATORIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	+	−	Both.
Valencia -	+ 1	+ 8	+ 7	+ 12	+ 22	+ 11	+ 7	+ 4	+ 9	+ 7	+ 11	+ 10	109	0	109
Armagh -	+ 10	+ 8	+ 12	+ 9	+ 22	+ 18	+ 16	− 3	+ 17	+ 11	+ 8	+ 7	138	3	141
Glasgow -	+ 3	+ 4	+ 8	+ 12	+ 17	+ 11	+ 10	+ 6	+ 10	+ 2	+ 6	+ 6	105	0	105
Aberdeen -	+ 14	+ 19	+ 14	+ 14	+ 20	+ 24	+ 10	+ 18	+ 12	+ 10	+ 10	+ 13	178	0	178
Falmouth -	+ 4	+ 4	+ 12	+ 6	+ 16	+ 11	+ 9	+ 10	+ 18	+ 11	+ 15	+ 9	125	0	125
Stonyhurst -	+ 8	+ 13	+ 14	+ 19	+ 26	+ 27	+ 19	+ 18	+ 13	+ 13	+ 12	+ 12	194	0	194
Kew - -	+ 16	+ 17	+ 17	+ 18	+ 27	+ 27	− 4	+ 20	+ 21	+ 15	+ 5	+ 14	197	4	201

a_2, or coefficient of cos. 2*t*.

OBSERVATORIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	+	−	Both.
Valencia -	− 2	+ 6	+ 5	+ 2	− 3	+ 4	+ 2	+ 1	+ 1	+ 3	− 3	+ 2	28	6	34
Armagh -	− 4	− 2	+ 3	+ 2	0	− 5	+ 3	+ 1	− 3	− 2	+ 1	+ 1	11	16	27
Glasgow -	+ 2	+ 1	+ 5	− 1	+ 4	+ 3	+ 7	0	+ 4	− 2	0	− 1	15	9	24
Aberdeen -	− 2	0	+ 1	− 11	− 3	+ 3	+ 3	+ 2	+ 1	0	− 3	+ 5	19	15	34
Falmouth -	+ 4	+ 5	+ 5	− 2	+ 4	− 1	+ 2	− 3	− 1	+ 1	− 2	0	21	9	30
Stonyhurst -	+ 2	+ 4	+ 3	+ 6	− 2	− 2	+ 12	+ 1	+ 4	+ 7	+ 3	+ 2	44	4	48
Kew - -	0	− 1	+ 2	0	+ 2	− 1	− 7	+ 1	+ 1	+ 4	− 2	+ 1	11	11	22

b_2, or coefficient of sin. 2*t*.

OBSERVATORIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	+	−	Both.
Valencia -	+ 2	+ 12	+ 8	+ 5	+ 7	+ 9	+ 8	+ 10	+ 5	+ 8	− 3	+ 5	79	3	82
Armagh -	+ 4	+ 2	+ 7	+ 5	+ 5	+ 7	+ 5	0	+ 5	+ 6	+ 2	+ 2	50	0	50
Glasgow -	0	+ 3	+ 3	+ 8	0	+ 3	+ 6	+ 7	+ 9	+ 3	+ 5	+ 1	48	0	48
Aberdeen -	− 3	+ 2	+ 3	+ 4	+ 6	+ 4	+ 10	+ 4	+ 2	+ 5	+ 4	+ 1	45	3	48
Falmouth -	+ 4	+ 4	+ 3	+ 1	+ 2	+ 6	+ 4	+ 3	+ 5	+ 2	+ 8	0	42	0	42
Stonyhurst -	0	+ 1	+ 1	0	+ 6	+ 1	− 12	+ 4	+ 4	0	+ 4	+ 6	27	12	39
Kew - -	+ 1	+ 1	+ 4	− 7	+ 1	+ 10	− 8	− 6	+ 2	+ 9	+ 4	+ 2	24	21	45

a_3, or coefficient of cos. 3*t*.

OBSERVATORIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	+	−	Both.
Valencia -	0	− 1	+ 6	+ 2	+ 3	+ 3	0	− 2	0	+ 3	0	+ 3	20	3	23
Armagh -	0	+ 6	+ 4	+ 2	+ 8	+ 8	+ 3	+ 3	+ 5	+ 4	− 1	+ 1	44	1	45
Glasgow -	− 2	+ 3	+ 3	+ 9	− 1	0	− 1	+ 4	+ 2	+ 6	− 1	− 1	27	6	33
Aberdeen -	0	+ 5	− 2	+ 3	0	+ 8	+ 6	− 3	+ 3	+ 5	− 1	+ 2	32	6	38
Falmouth -	− 2	− 3	+ 3	+ 1	0	+ 1	+ 3	+ 3	0	+ 2	− 2	+ 3	16	7	23
Stonyhurst -	0	+ 1	+ 3	− 2	+ 5	− 2	+ 2	+ 2	− 1	+ 6	0	0	19	5	24
Kew - -	+ 4	+ 2	− 1	+ 11	+ 4	+ 5	− 1	− 8	+ 3	+ 6	+ 3	+ 1	39	10	49

b_3, or coefficient of sin. 3*t*.

OBSERVATORIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	+	−	Both.
Valencia -	− 1	+ 1	+ 6	+ 2	+ 3	+ 4	+ 2	+ 5	0	− 1	− 1	+ 3	26	3	29
Armagh -	+ 1	+ 1	− 2	+ 1	+ 2	0	0	+ 2	+ 2	+ 1	+ 3	0	13	2	15
Glasgow -	0	− 4	0	− 3	+ 3	+ 4	0	+ 2	+ 1	+ 2	− 1	+ 4	16	8	24
Aberdeen	+ 4	+ 8	− 8	+ 4	+ 3	+ 8	− 3	+ 1	+ 1	0	+ 1	+ 7	37	11	48
Falmouth -	+ 2	+ 3	+ 5	+ 3	0	− 1	+ 1	+ 3	+ 3	+ 2	0	+ 3	25	1	26
Stonyhurst -	− 2	+ 1	0	+ 7	− 1	+ 6	+ 7	0	0	+ 4	+ 1	+ 4	30	3	33
Kew - -	+ 3	+ 1	+ 6	+ 2	+ 1	+ 2	+ 5	+ 4	+ 7	0	0	+ 3	34	0	34

PLATES

EXHIBITING IN A COMPARATIVE FORM

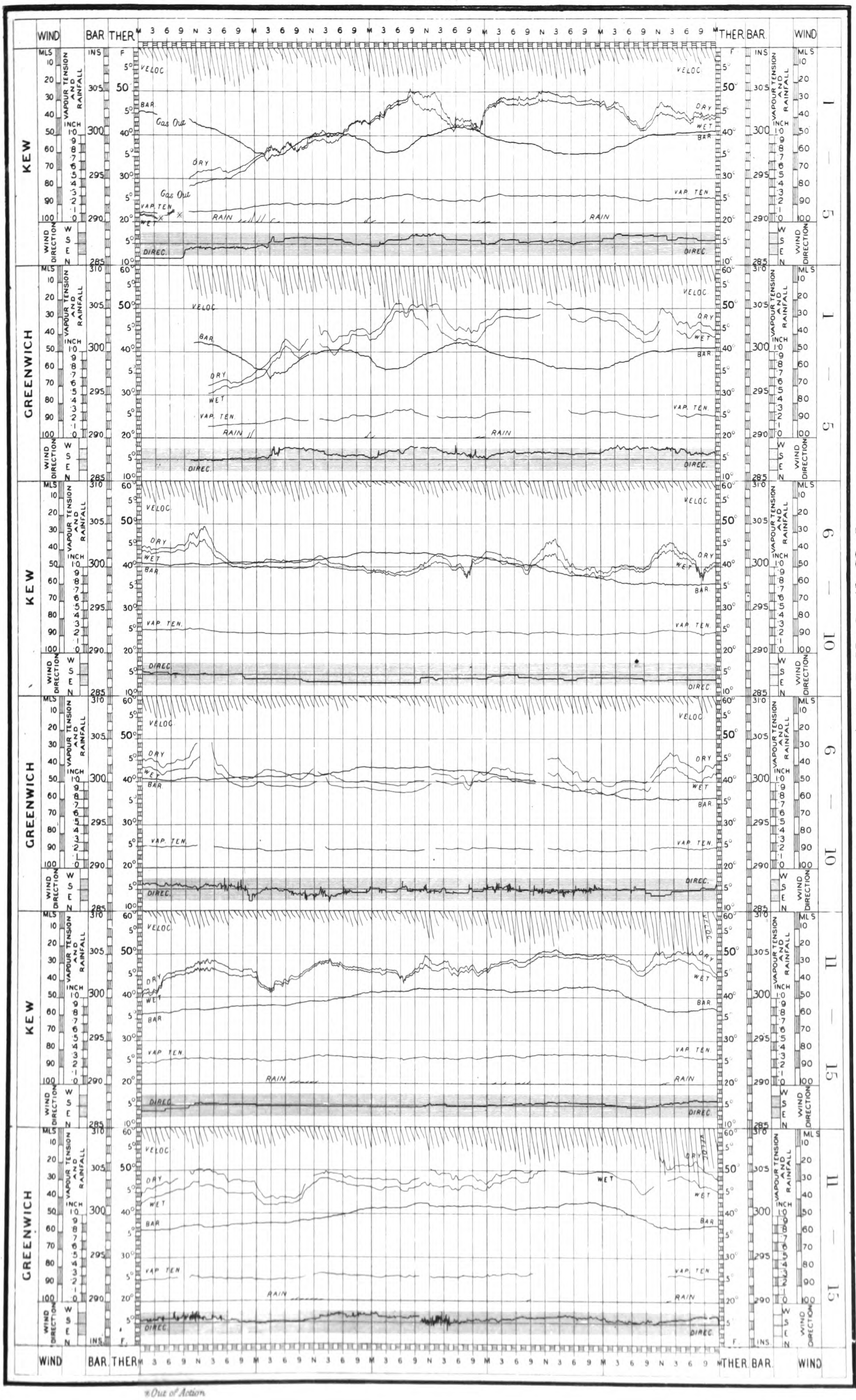
THE METEOROLOGICAL RESULTS

AT THE

OBSERVATORIES OF KEW AND GREENWICH.

For the Year 1875.

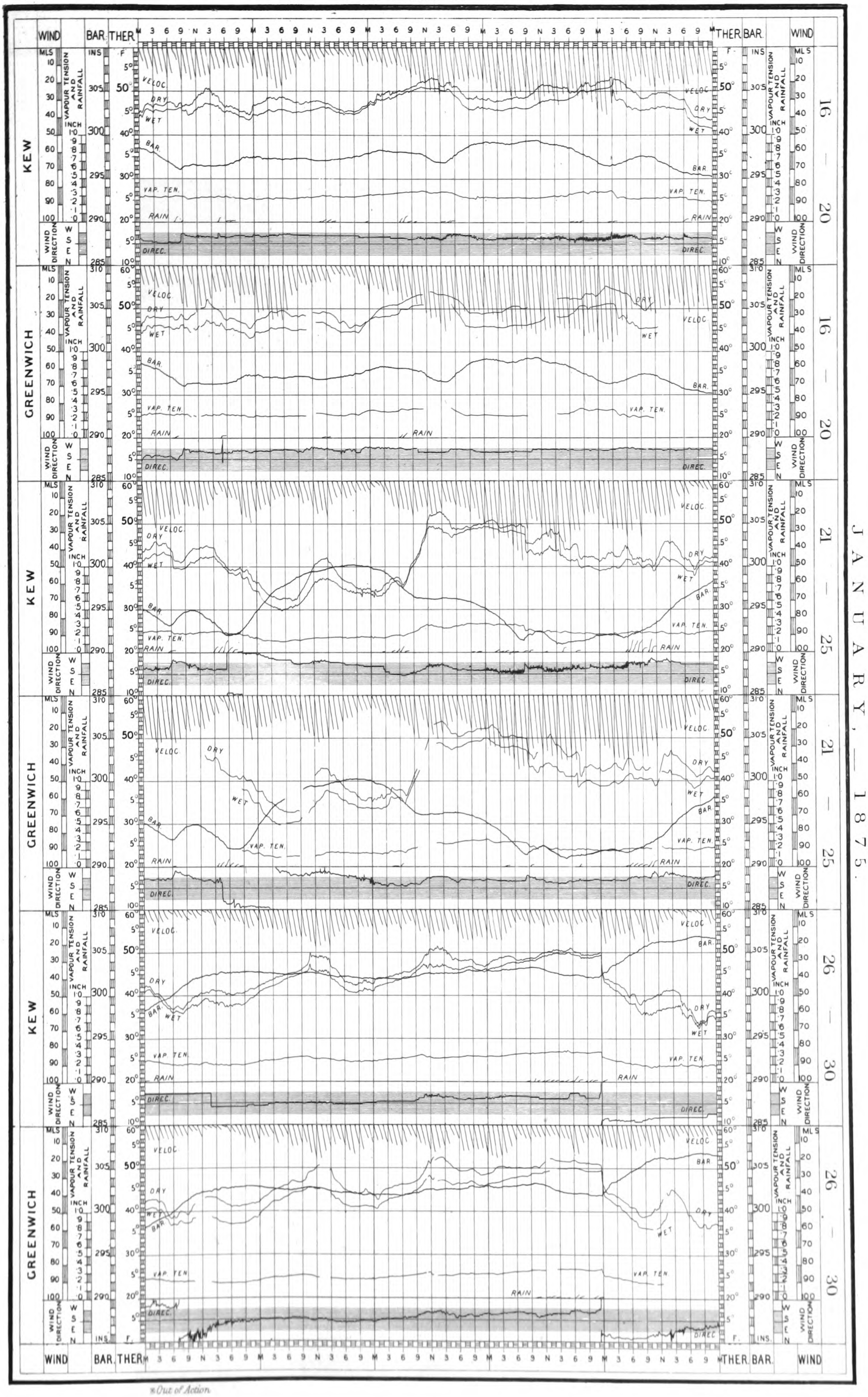
Plate I.



JANUARY, — 1875.

*Out of Action

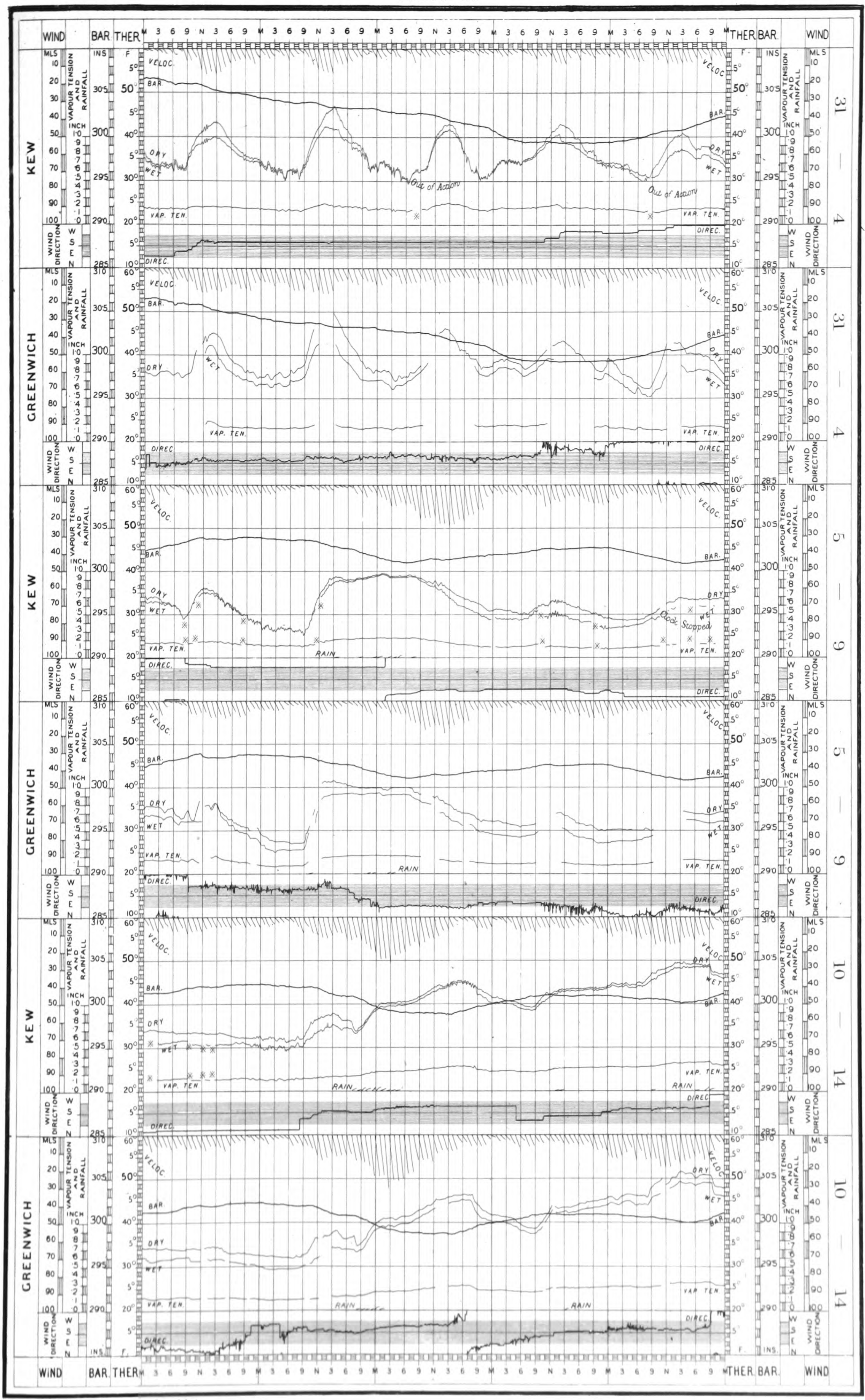
Plate II.



JANUARY, — 1875.

*Out of Action.

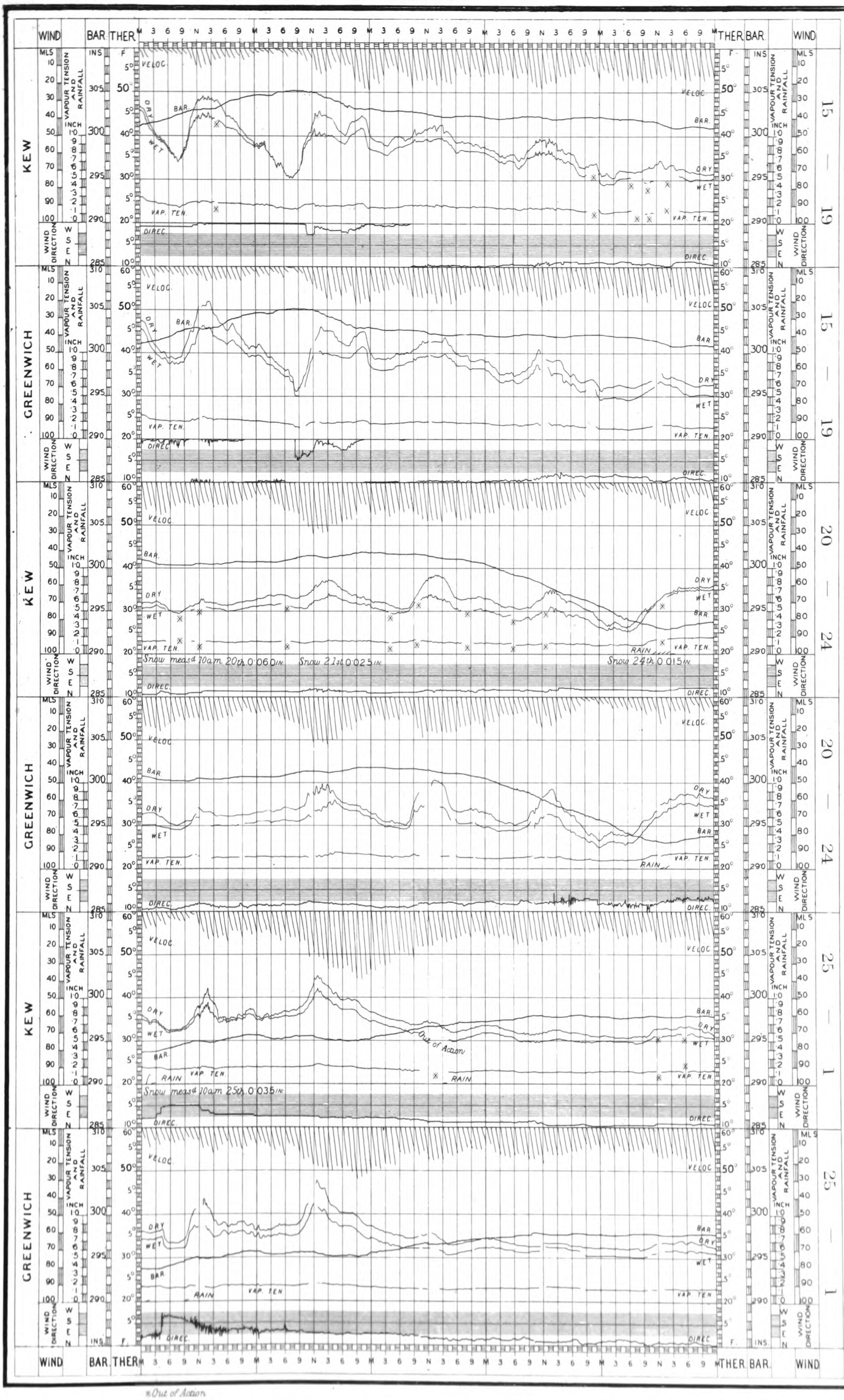
Plate III.



JANUARY & FEBRUARY. — 1875.

* Out of Action

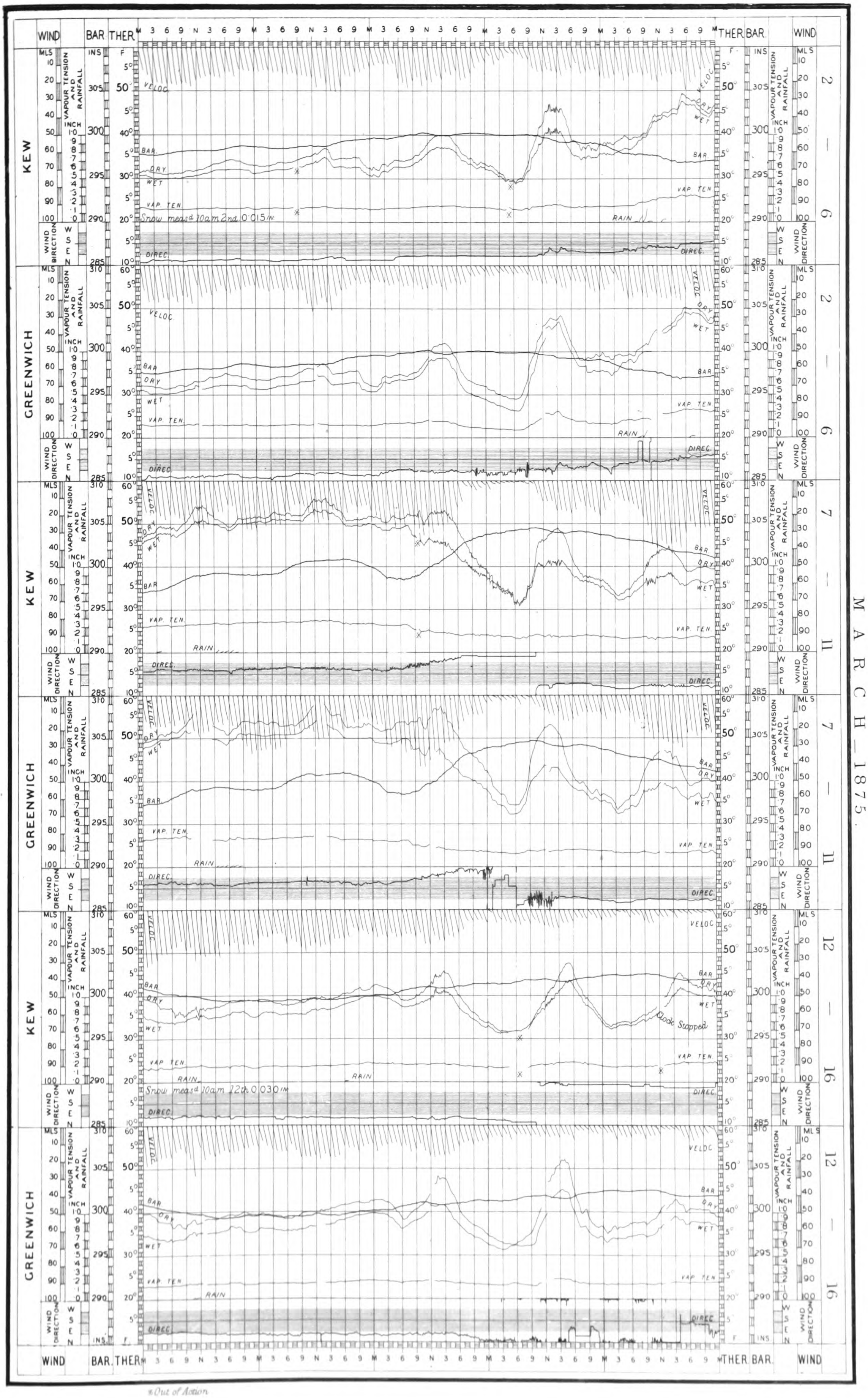
Plate IV.



FEBRUARY & MARCH, — 1875.

*Out of Action

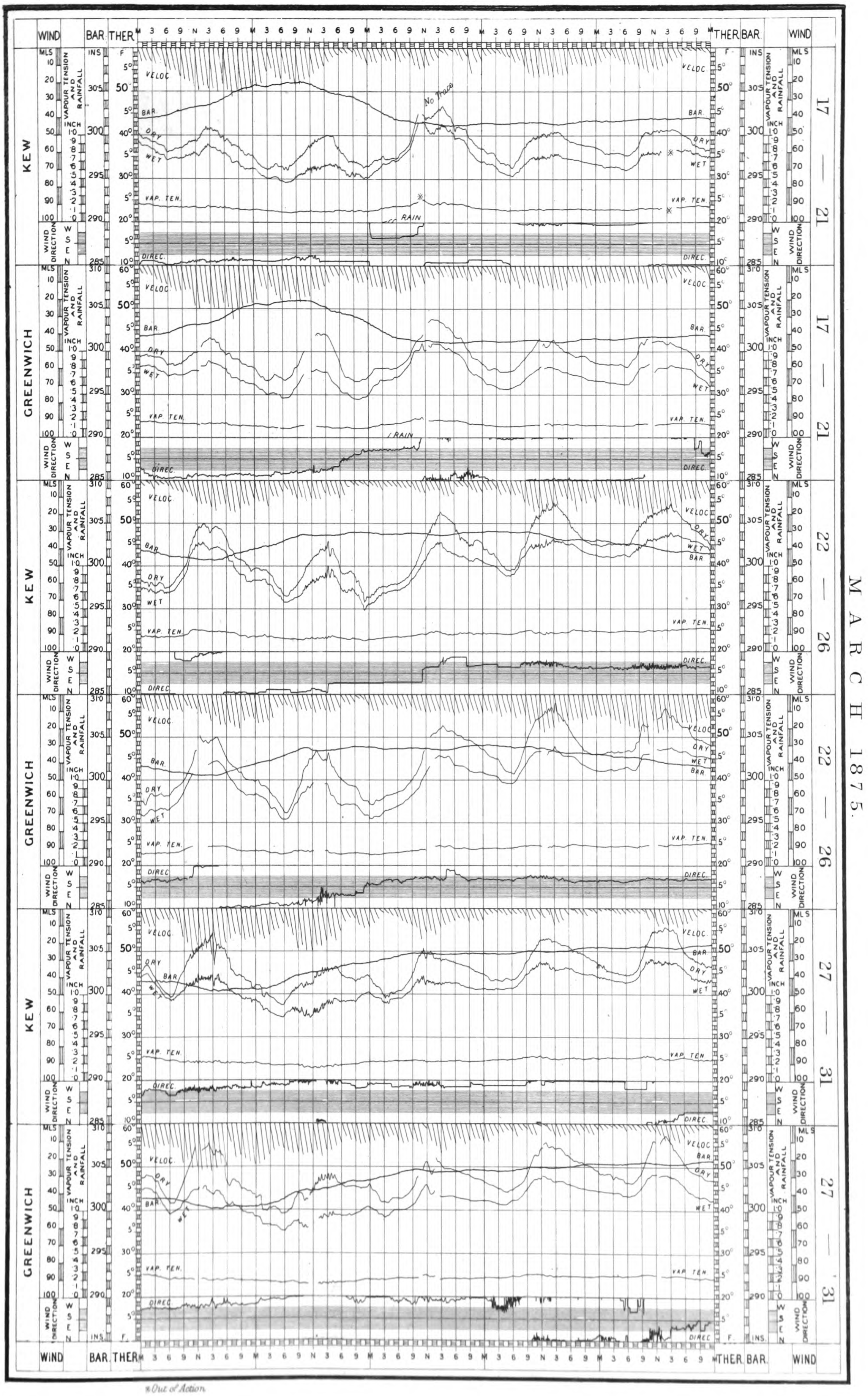
Plate V.



MARCH—1875.

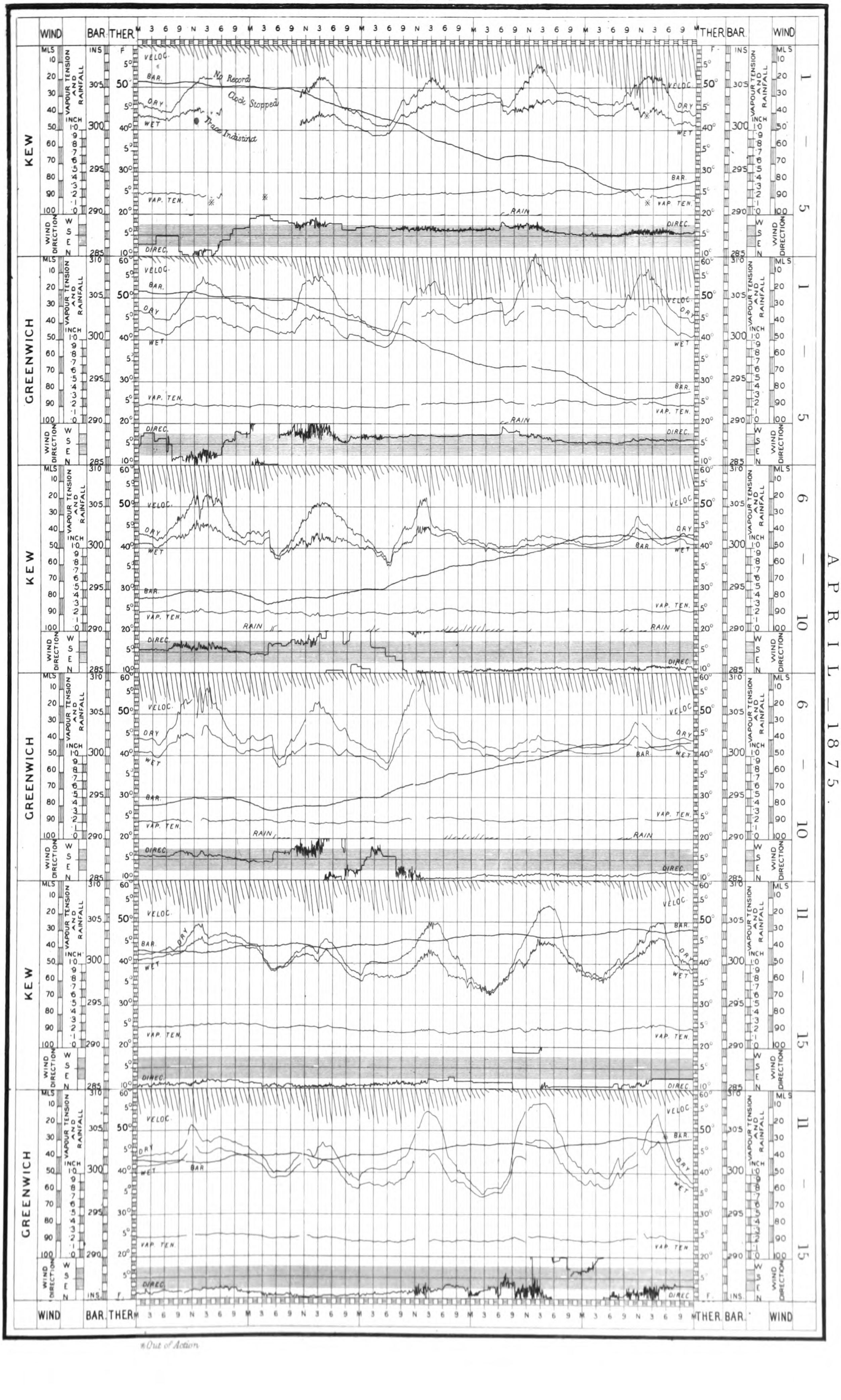
* Out of Action

Plate VI.



*Out of Action

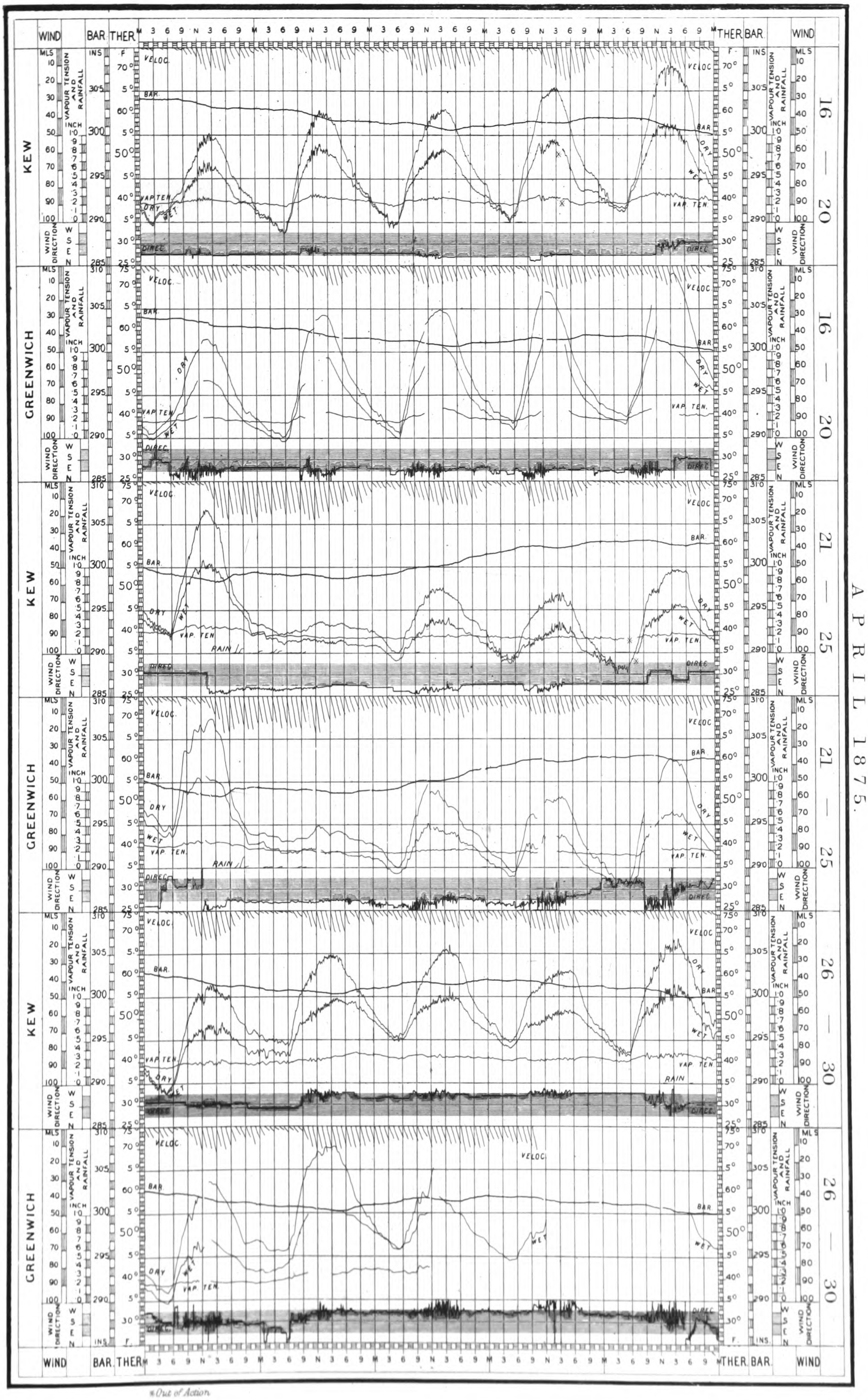
Plate VII.



APRIL _ 1875.

*Out of Action

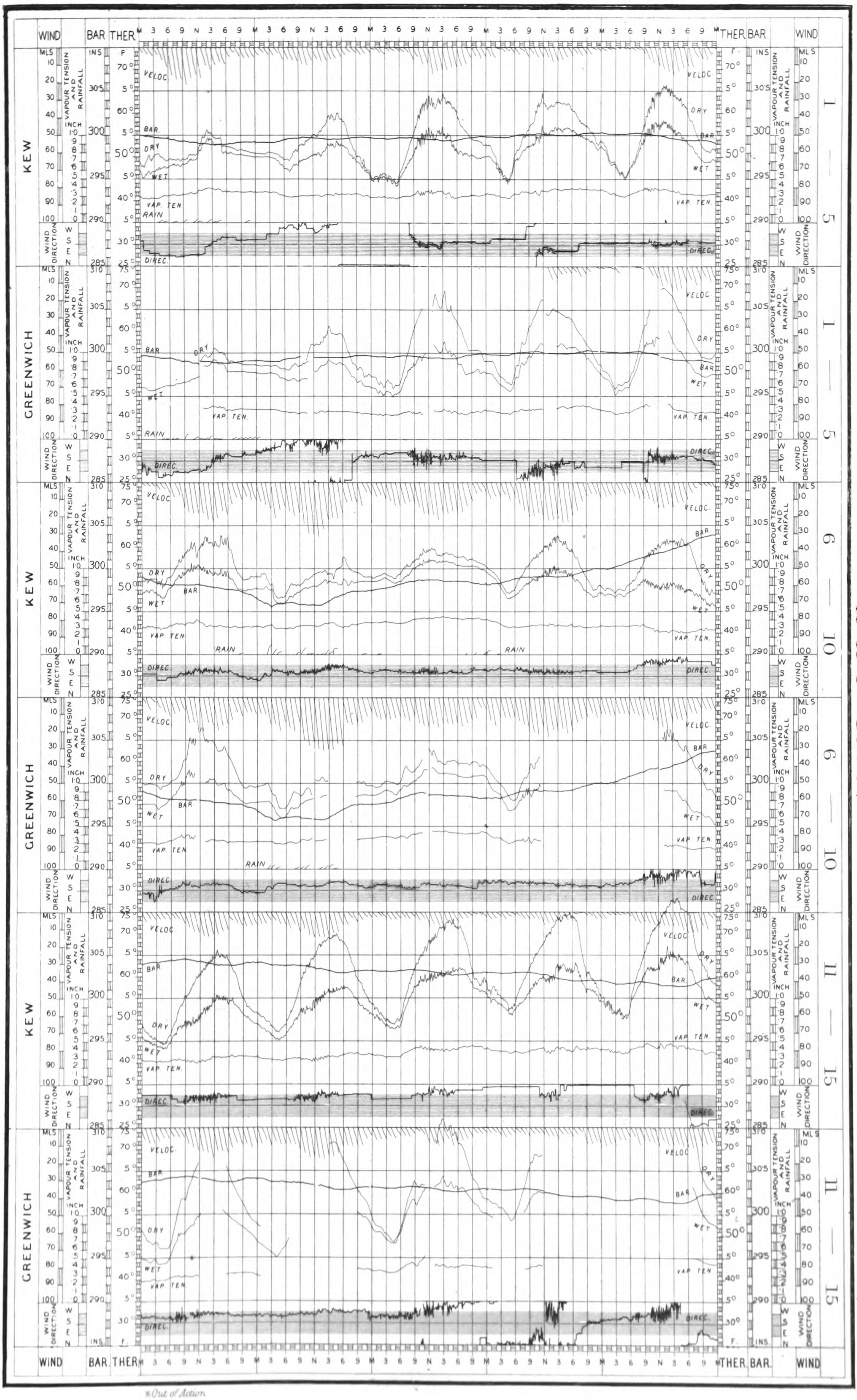
Plate VIII.



APRIL 1875.

*Out of Action

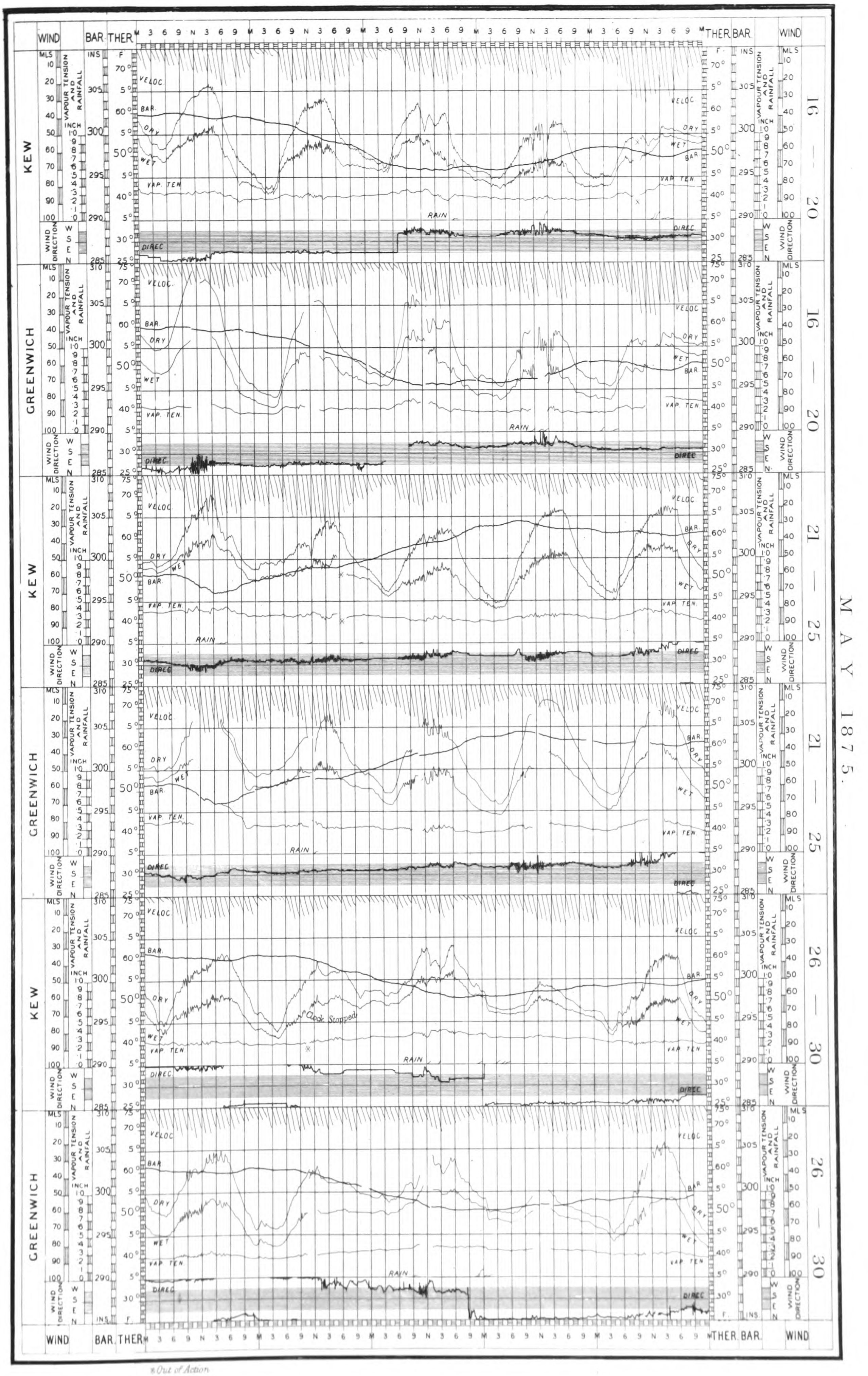
Plate IX.



MAY 1875.

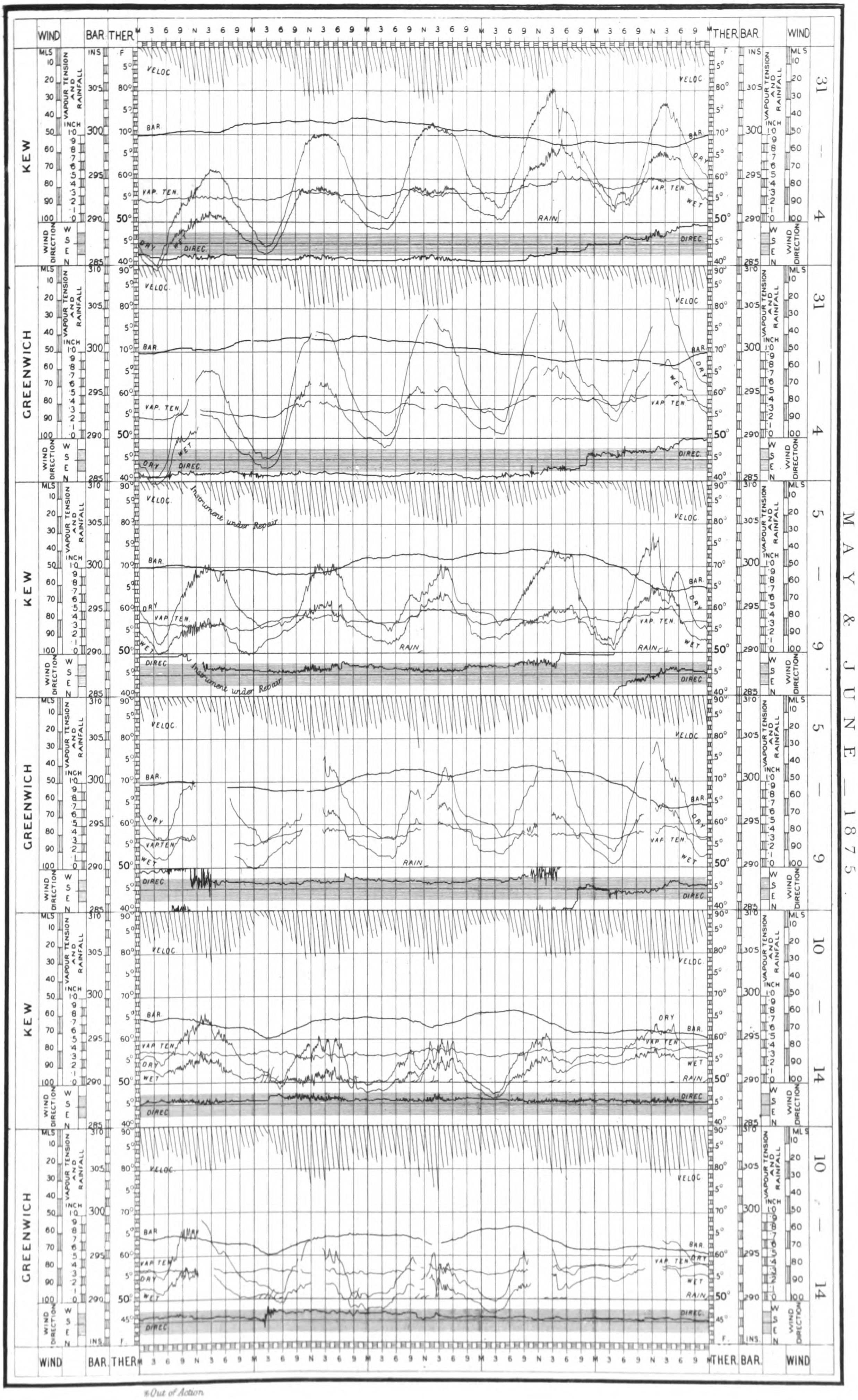
* Out of Action

Plate X.



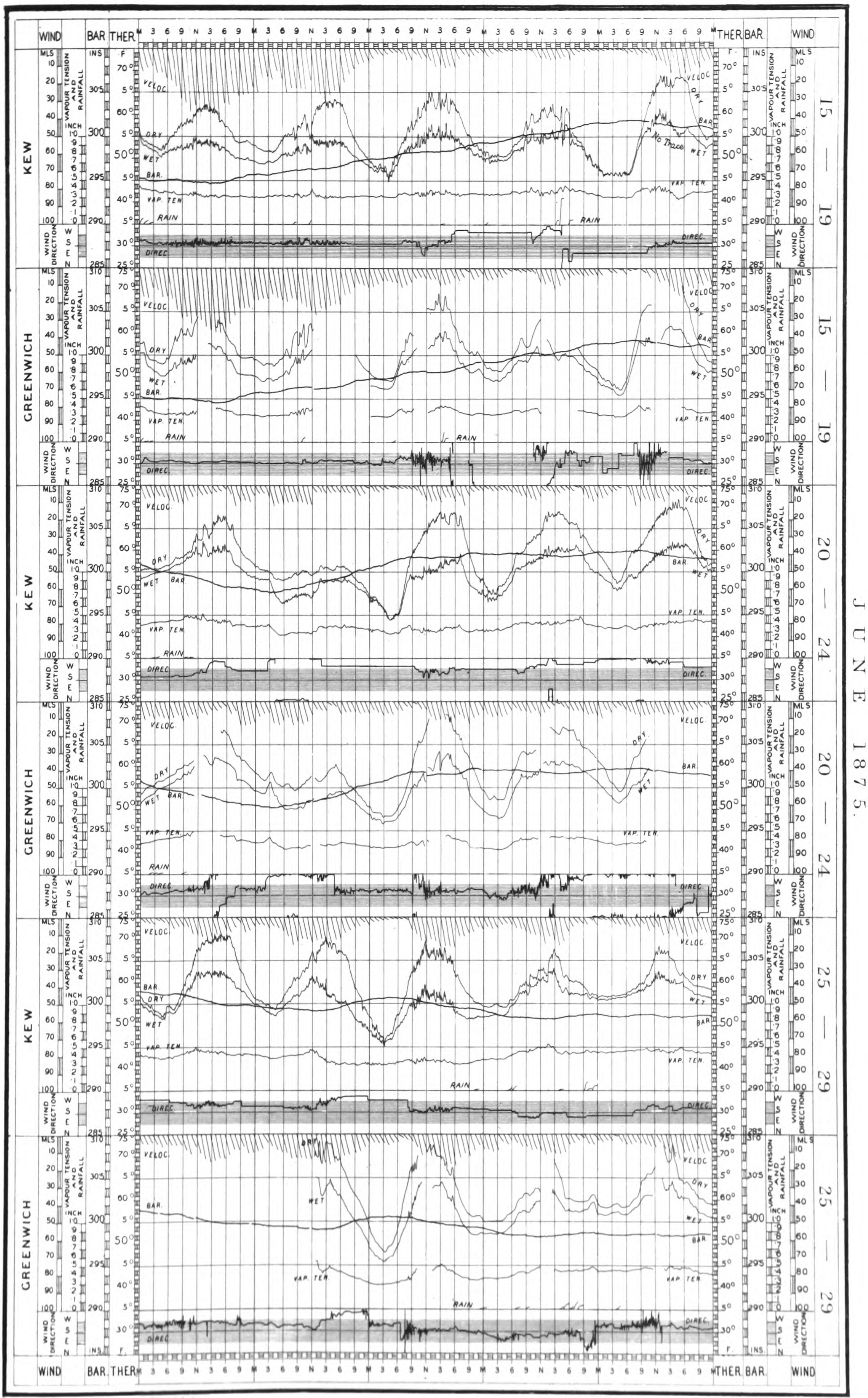
* Out of Action

Plate XI.



* Out of Action

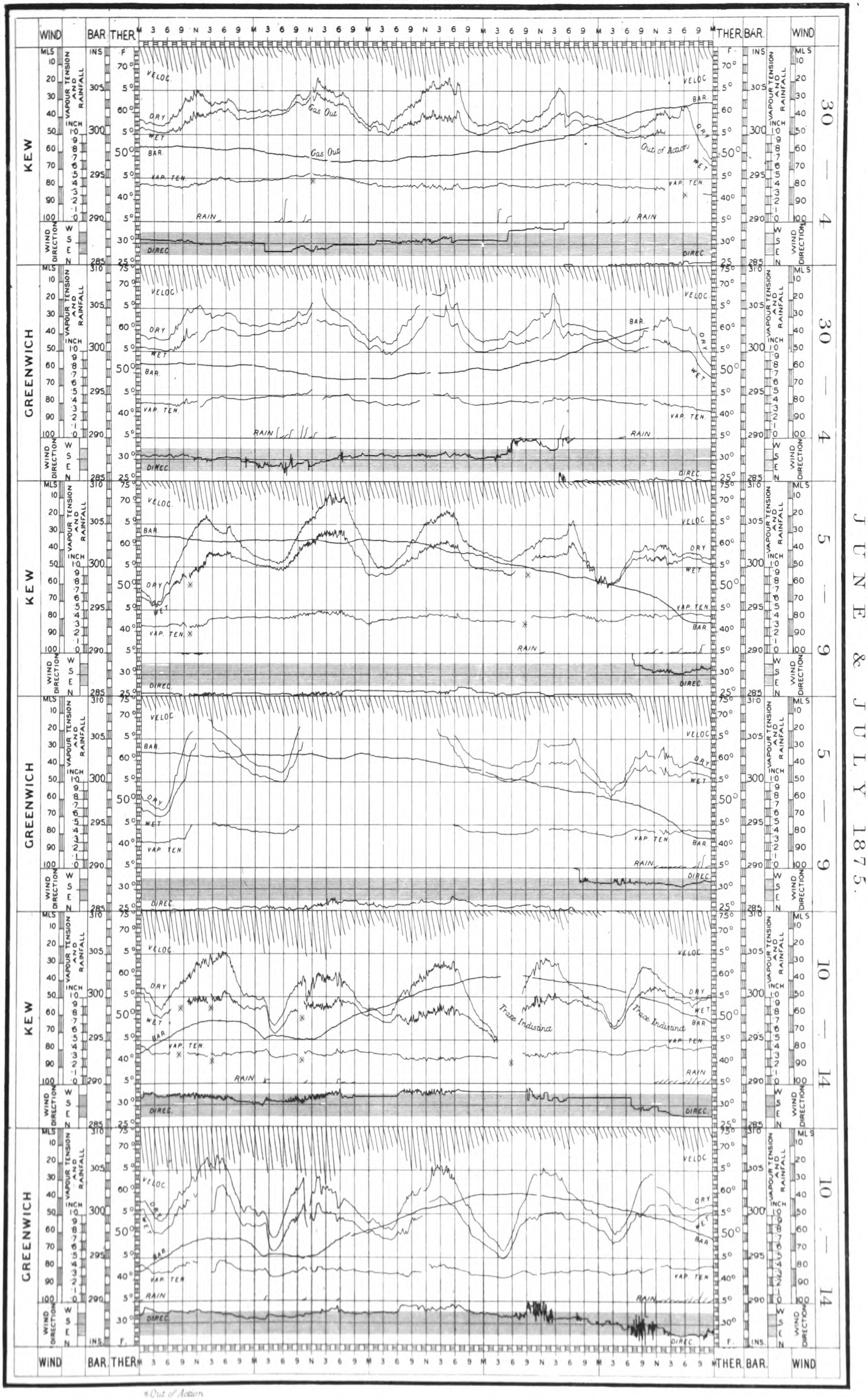
Plate XII.



JUNE 1875.

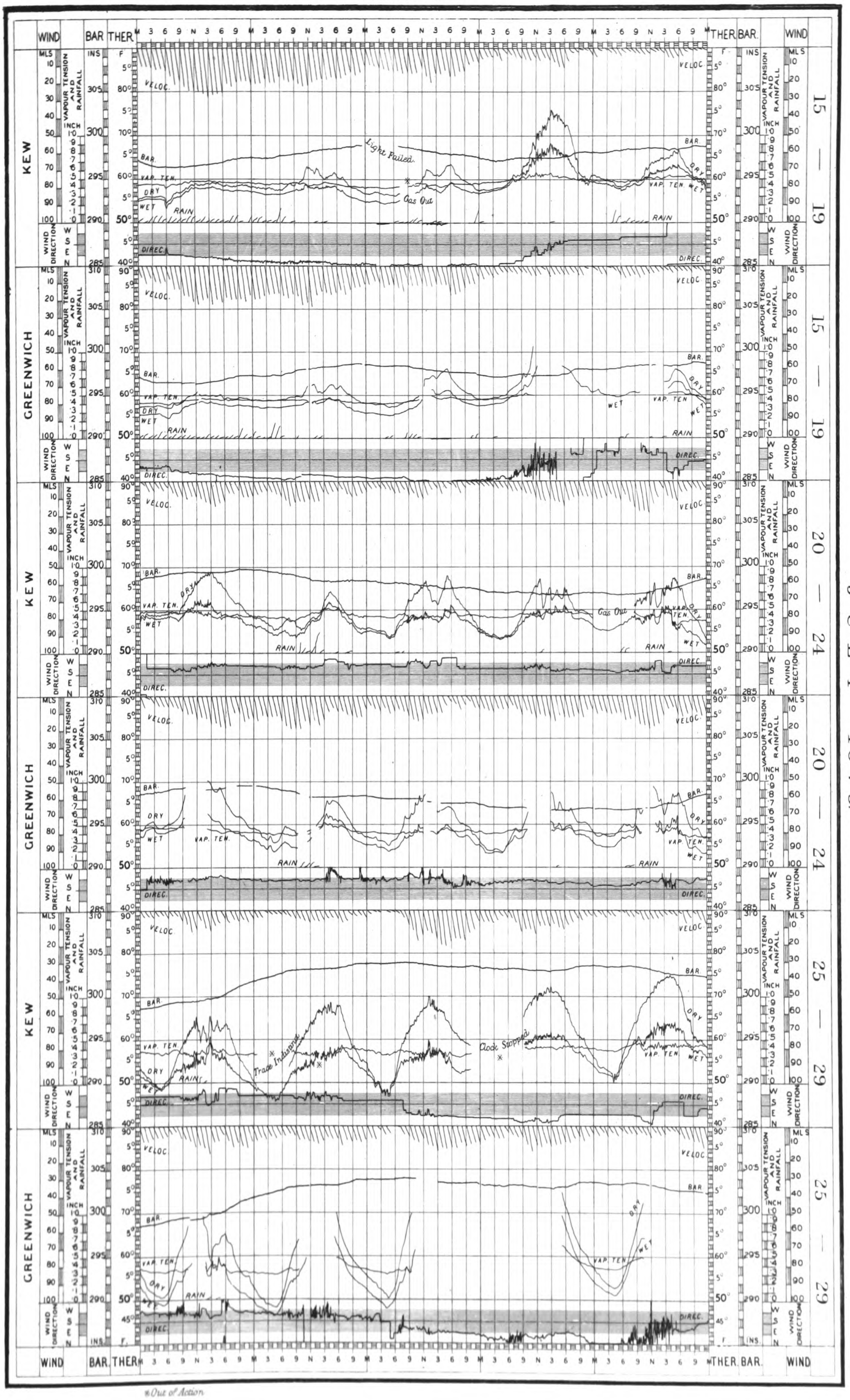
* Out of Action

Plate XIII.



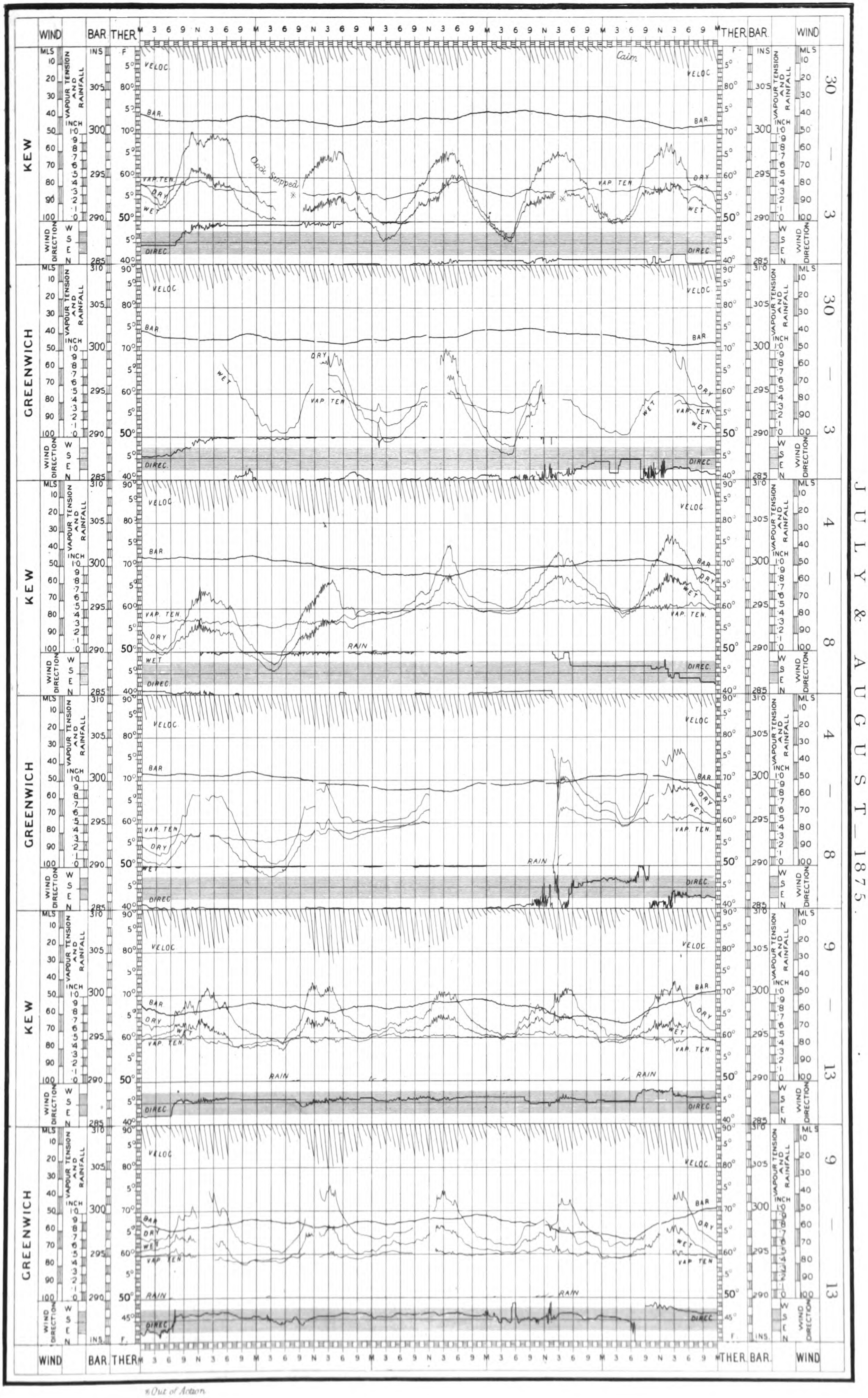
*Out of Action

Plate XIV.



*Out of Action

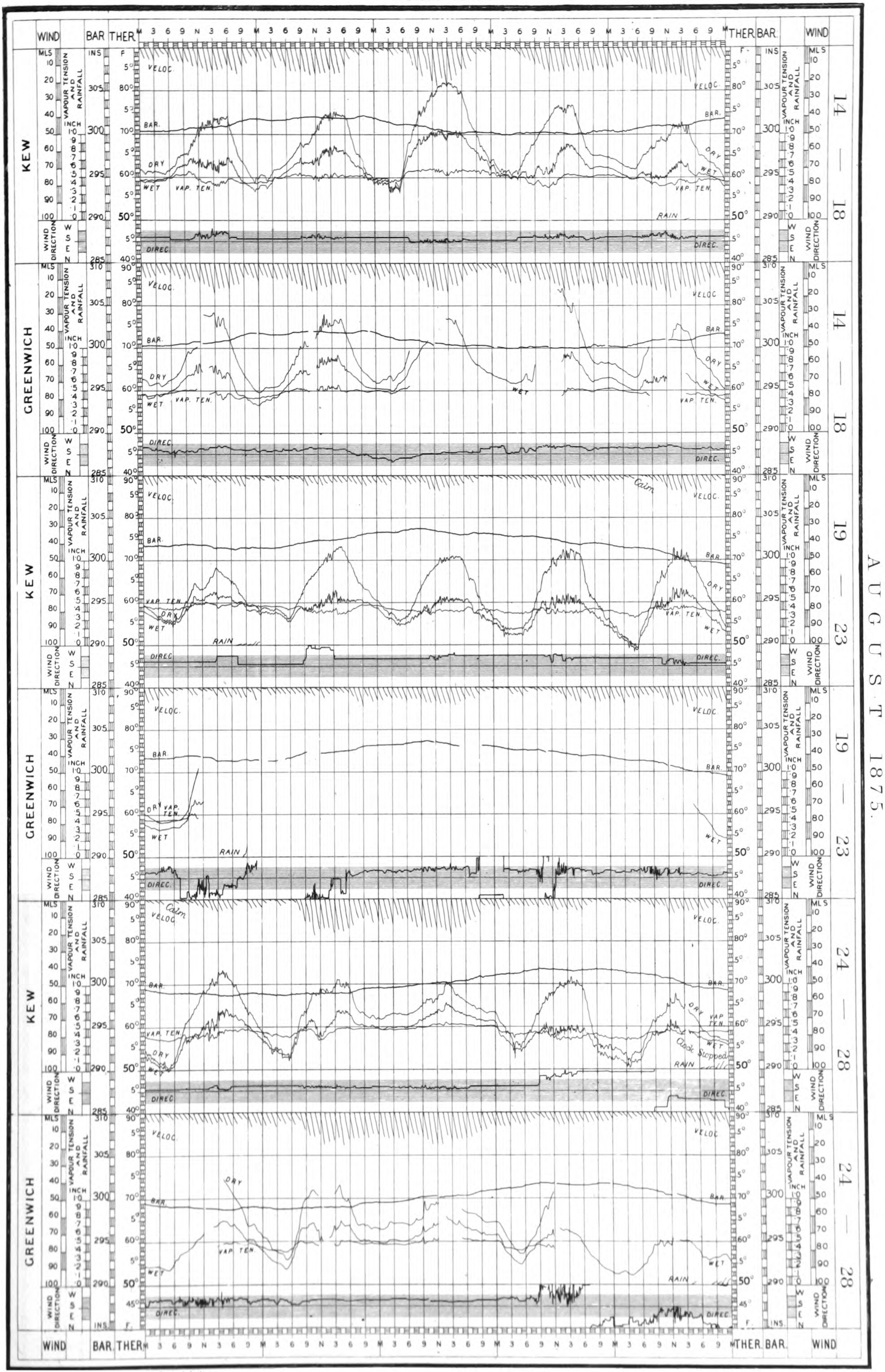
Plate XV.



JULY & AUGUST 1875.

*Out of Action

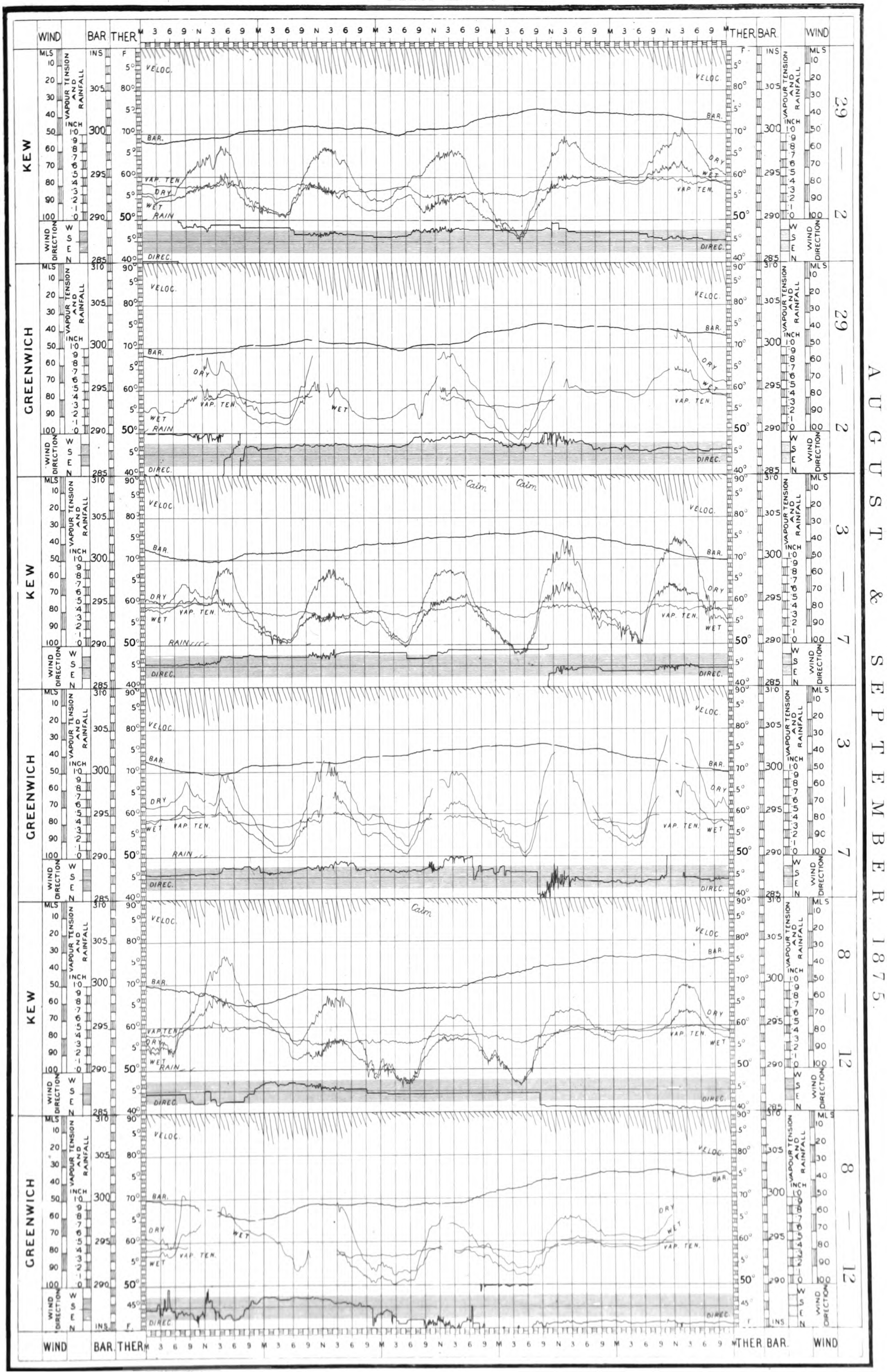
Plate XVI.



AUGUST 1875.

*Out of Action

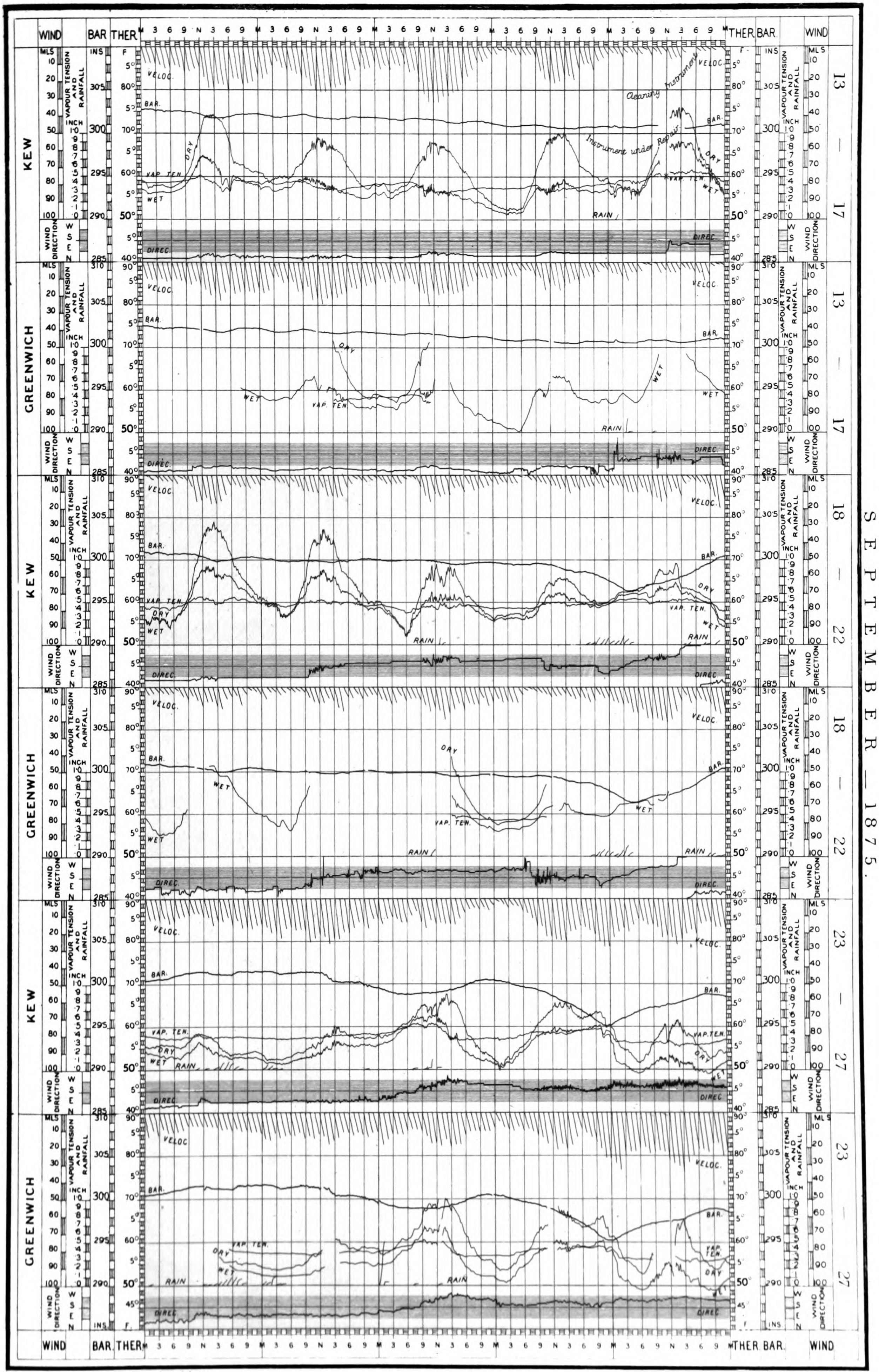
Plate XVII.



AUGUST & SEPTEMBER 1875.

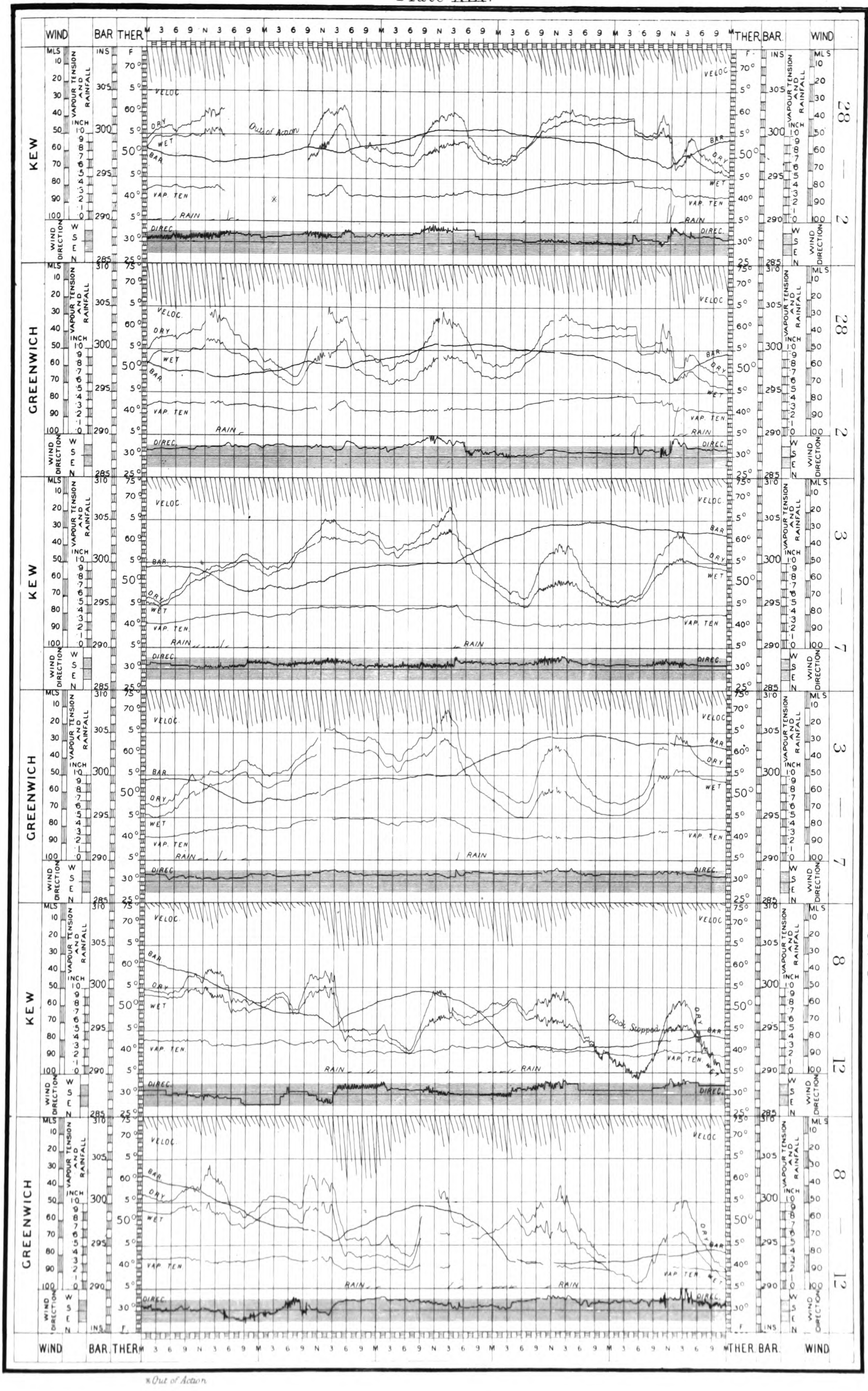
*Out of Action

Plate XVIII



* Out of Action

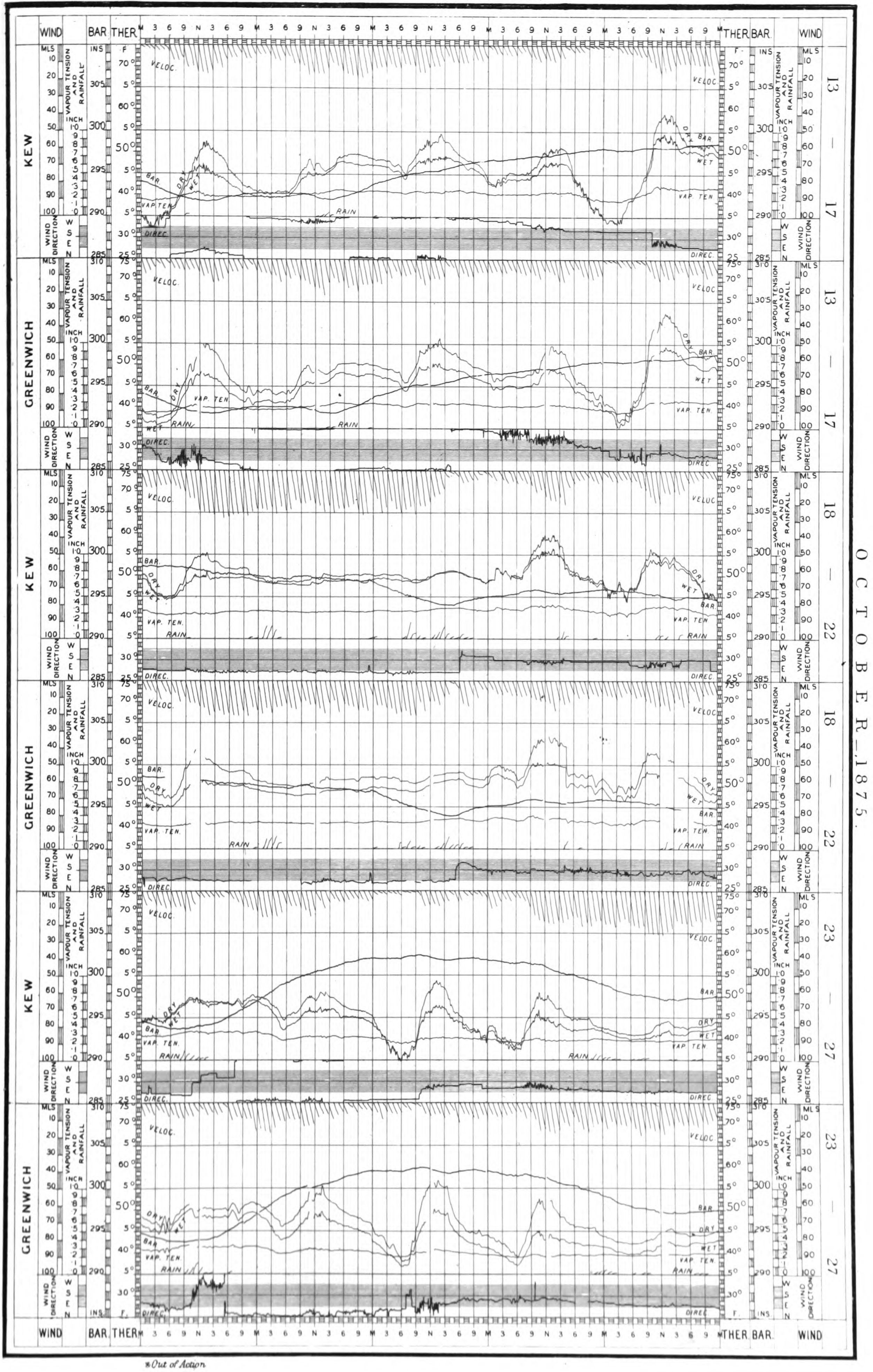
Plate XIX.



SEPTEMBER & OCTOBER 1875.

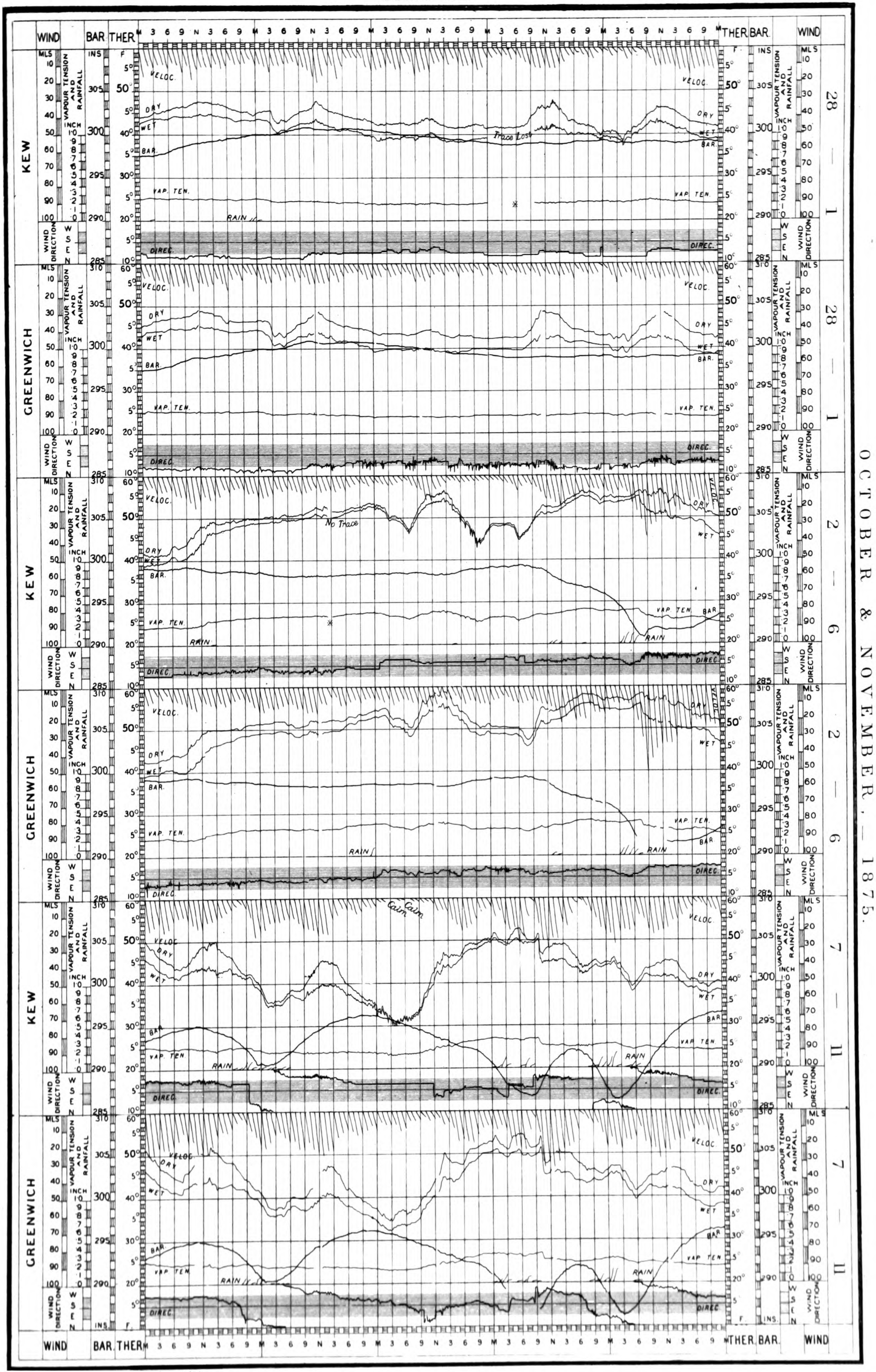
* Out of Action

Plate XX.



*Out of Action

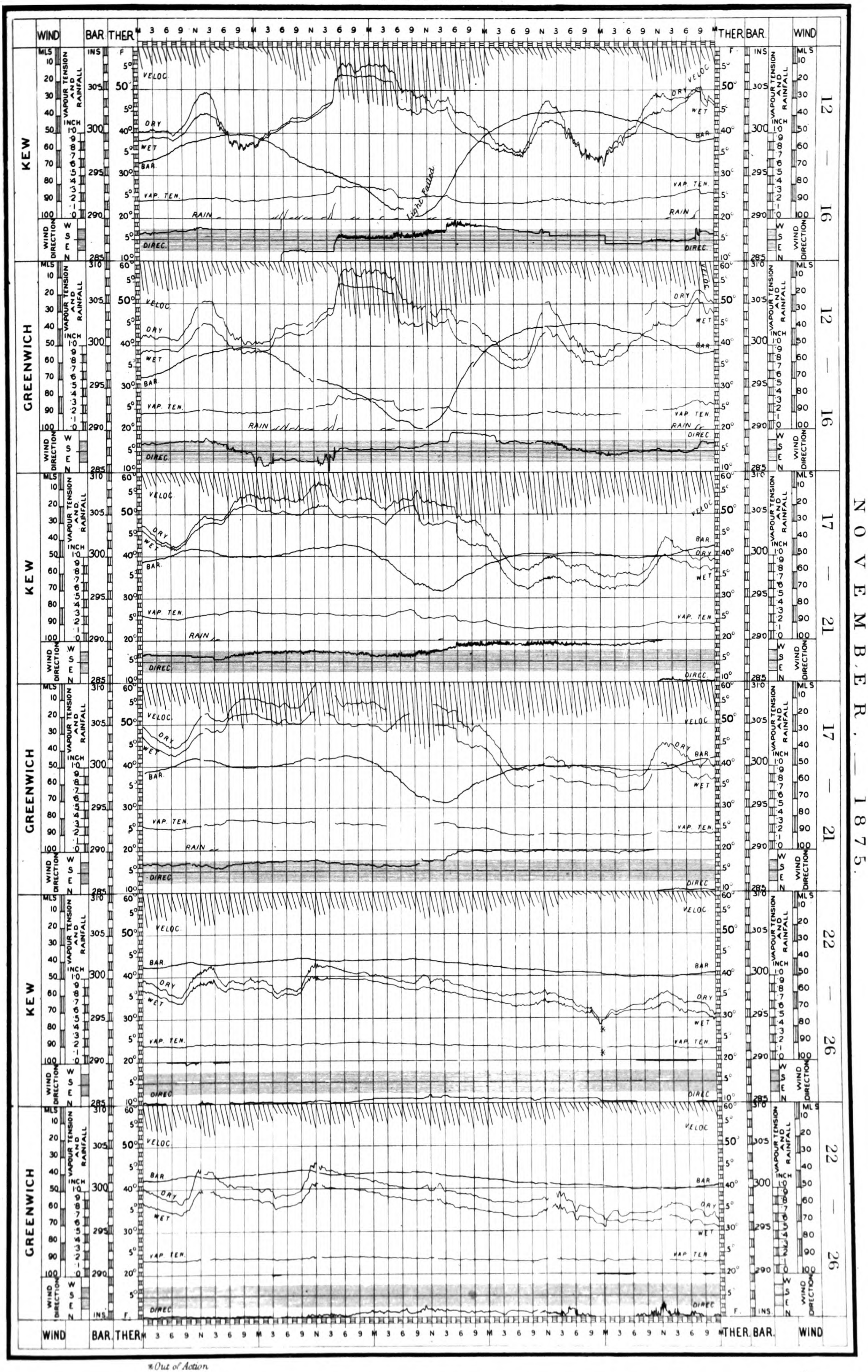
Plate XXI



OCTOBER & NOVEMBER, — 1875.

*Out of Action

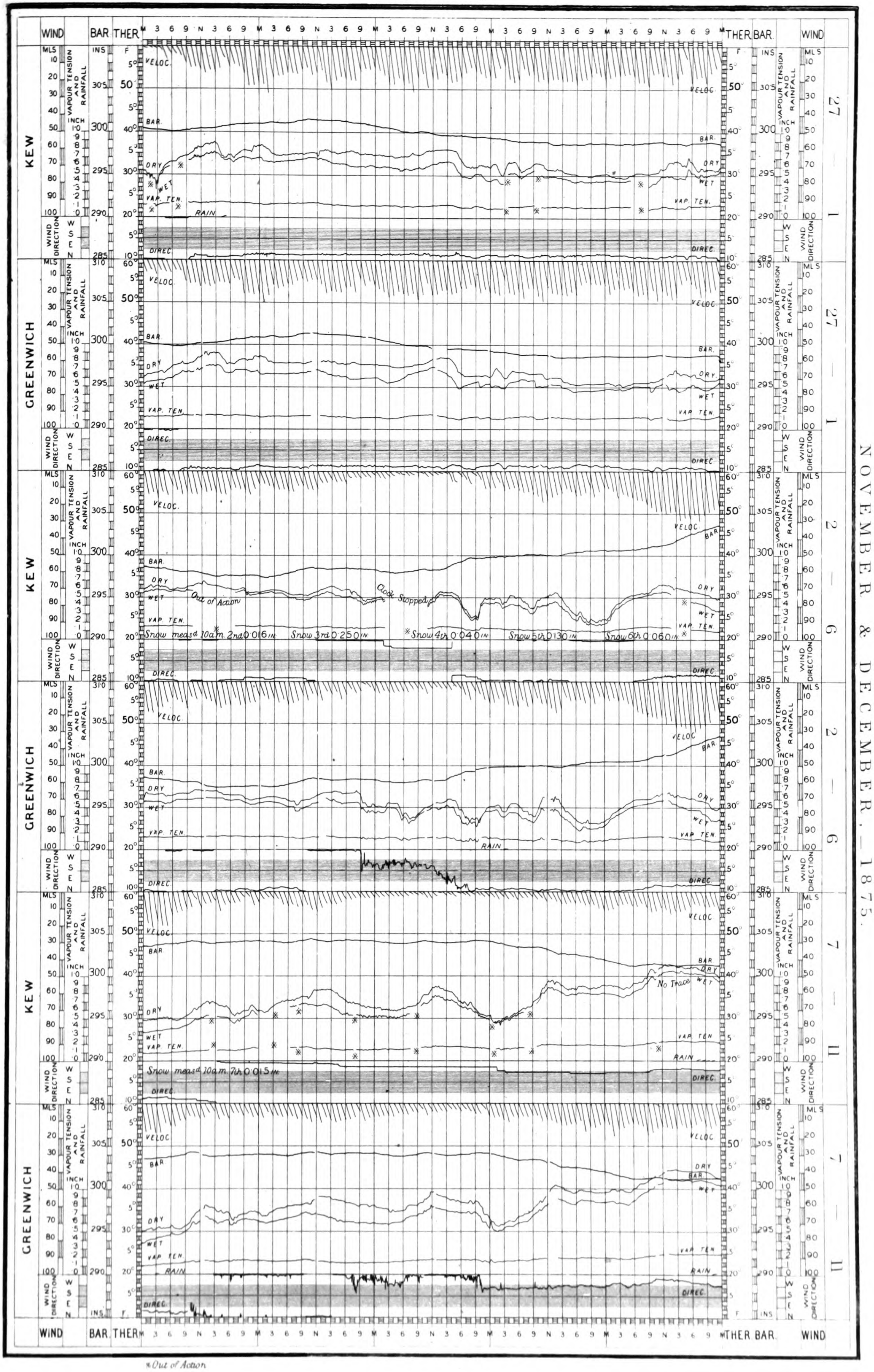
Plate XXII.



NOVEMBER. — 1875.

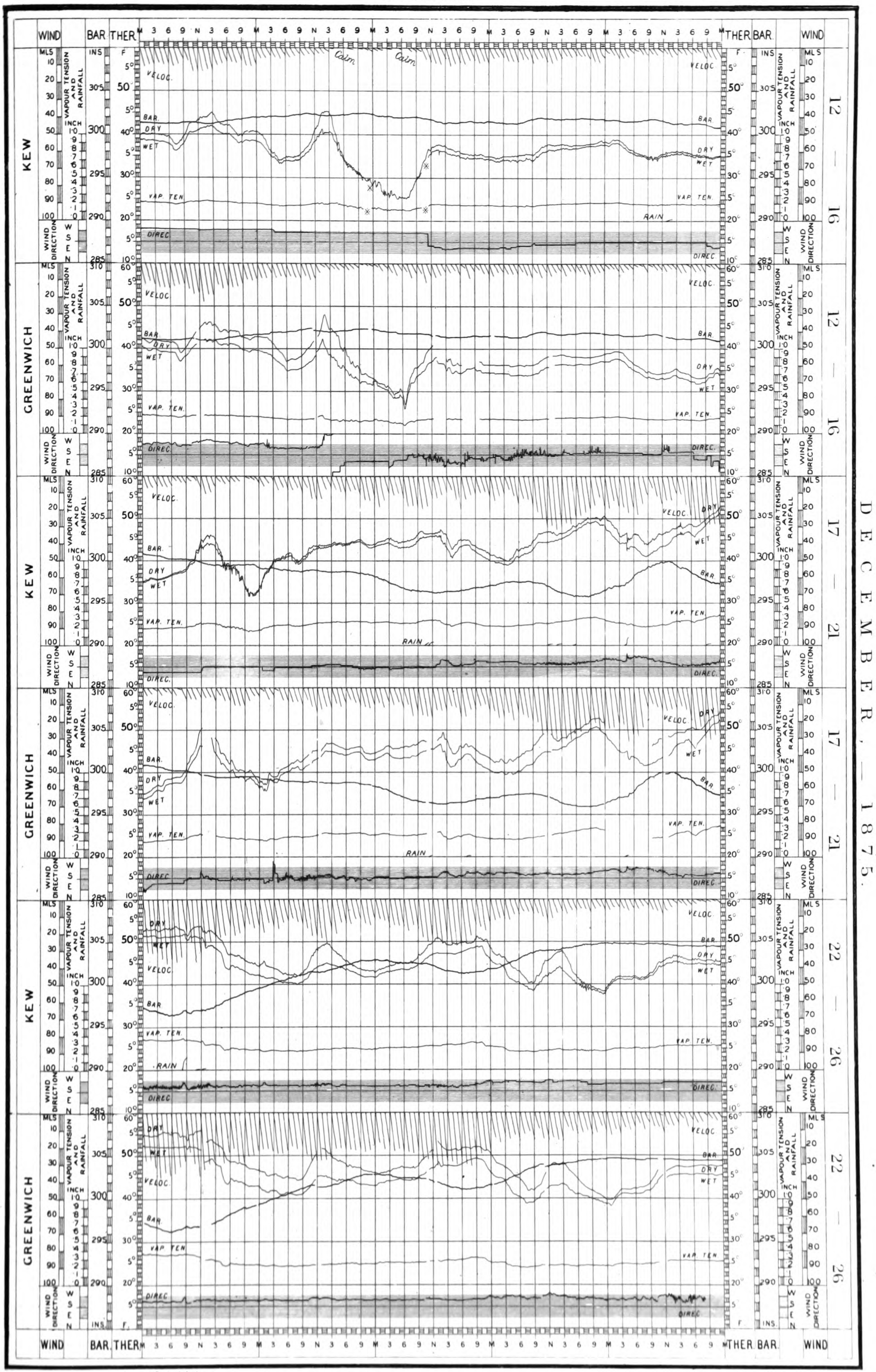
*Out of Action

Plate XXIII.



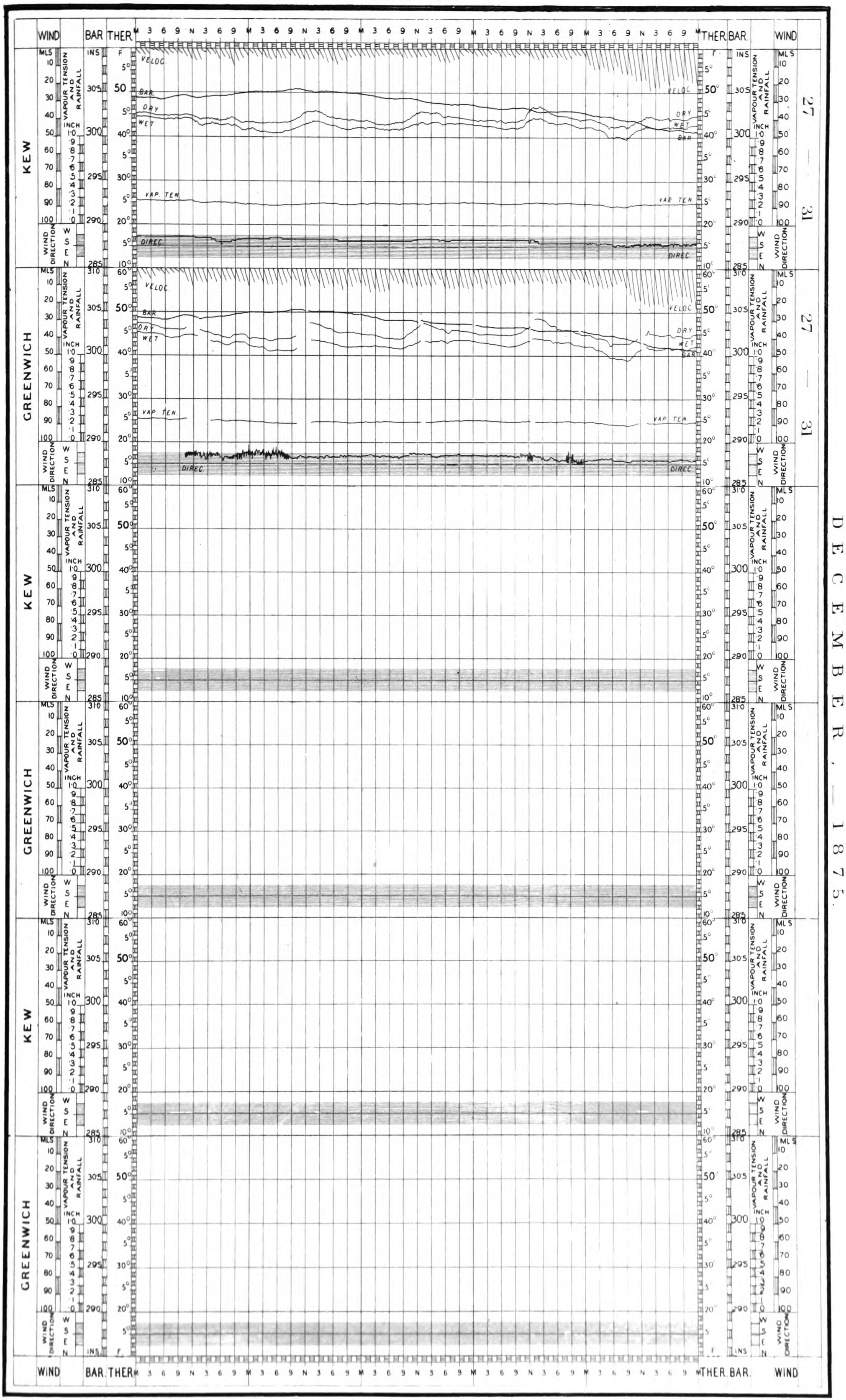
*Out of Action

Plate XXIV



*Out of Action

Plate XXV



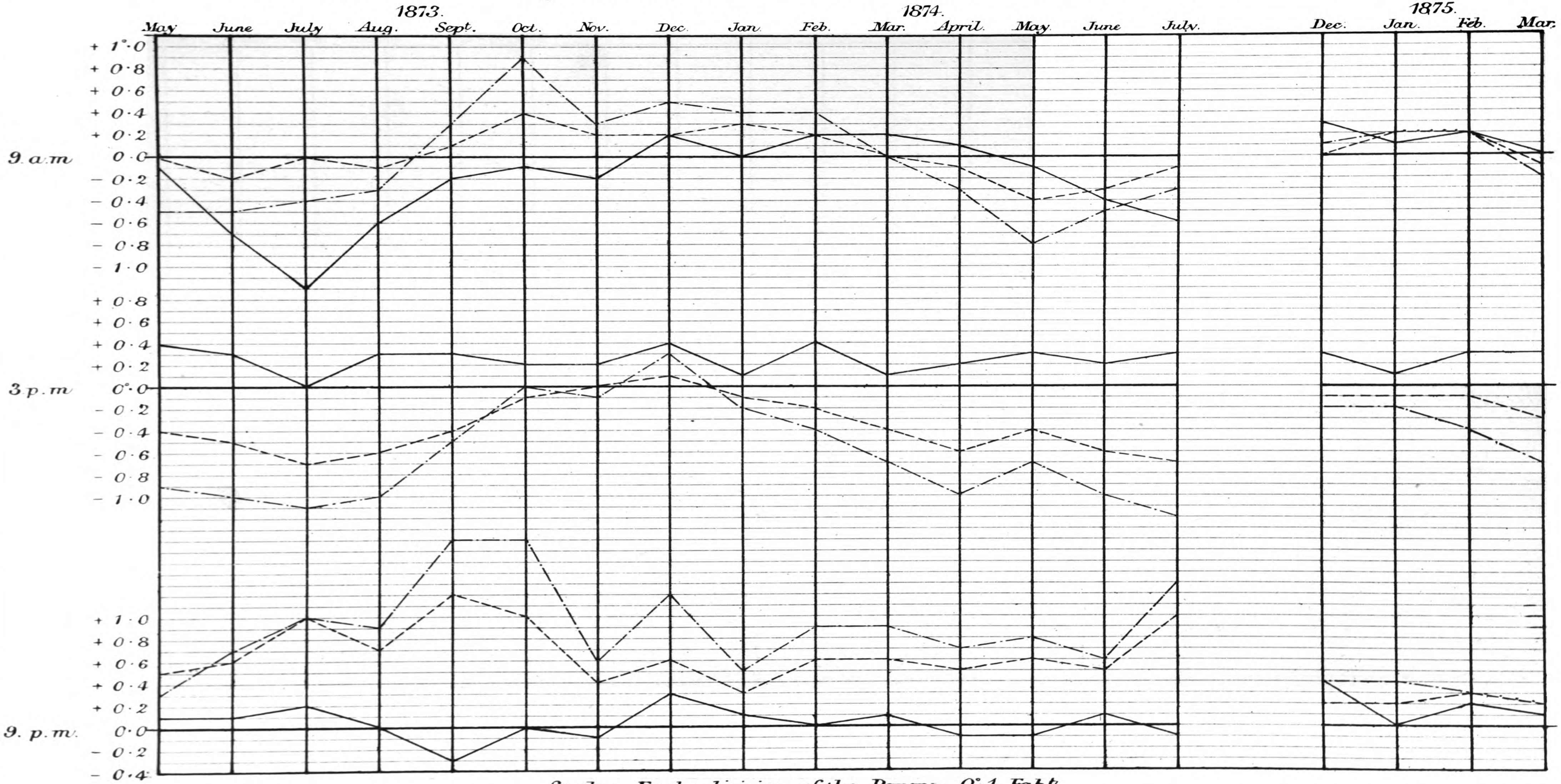
DECEMBER, — 1875.

* Out of Action

Fig 1. Table II.

Differences shown in the Monthly means of the Readings of Thermometers at the Kew Observatory and Pagoda by taking P. (lowest stage) as zero.

Observatory ———— Pagoda P (22'. 6") ———— . P'(69'. 0") - - - - - . P"(128'. 10") — . — . — .



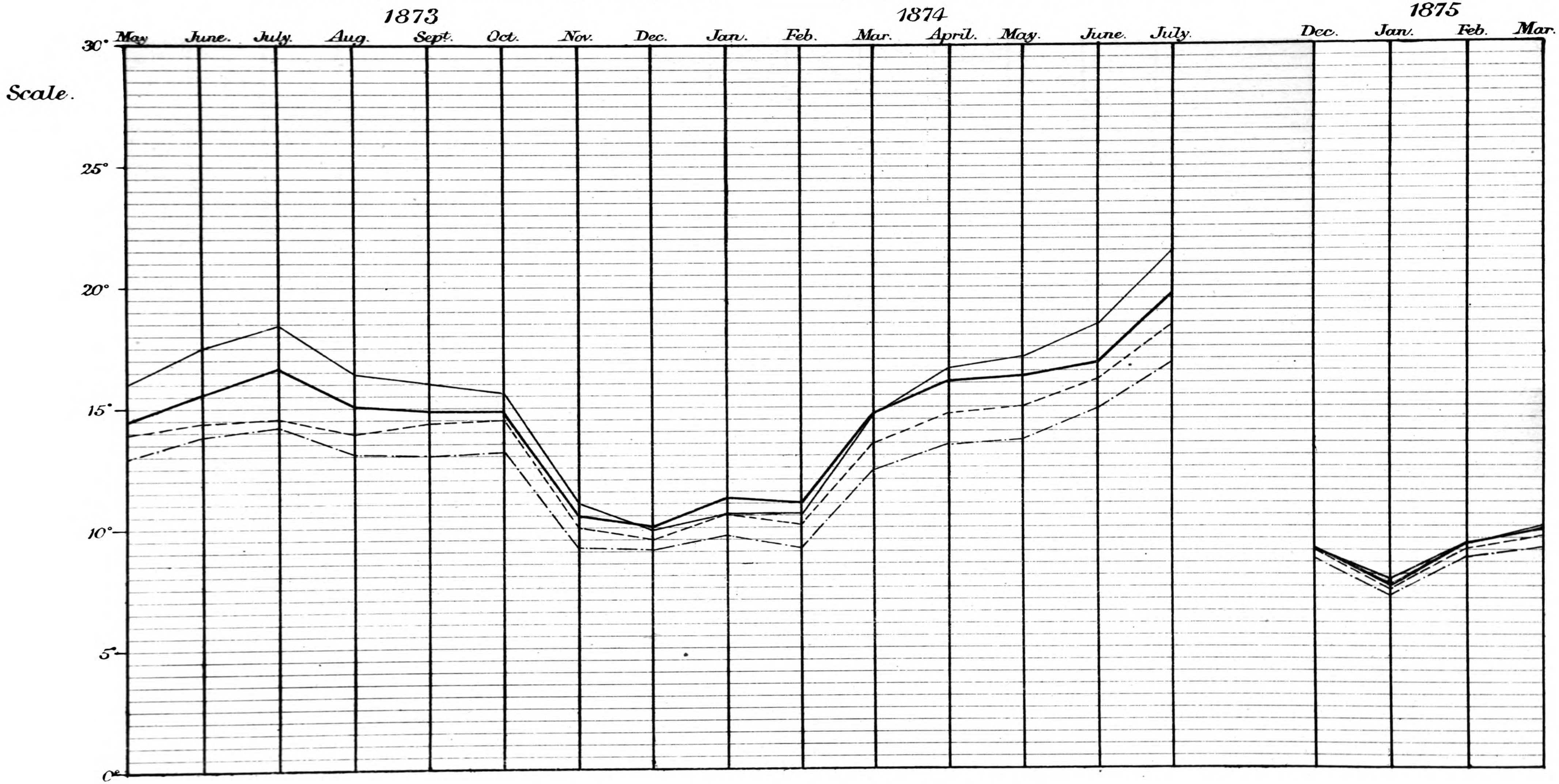
Scale: Each division of the Paper = 0°·1 Fahᵗ

Dangerfield Lith. 22 Bedford Sᵗ Covent Garden.

Fig. II. Table V.

Monthly means of the diurnal range of Temperature at Kew Observatory and at the Pagoda.

Observatory ———, *Pagoda* P(22'.6") ———, P'(69'.0") - - - - -, P''(128'.10") —·—·—.



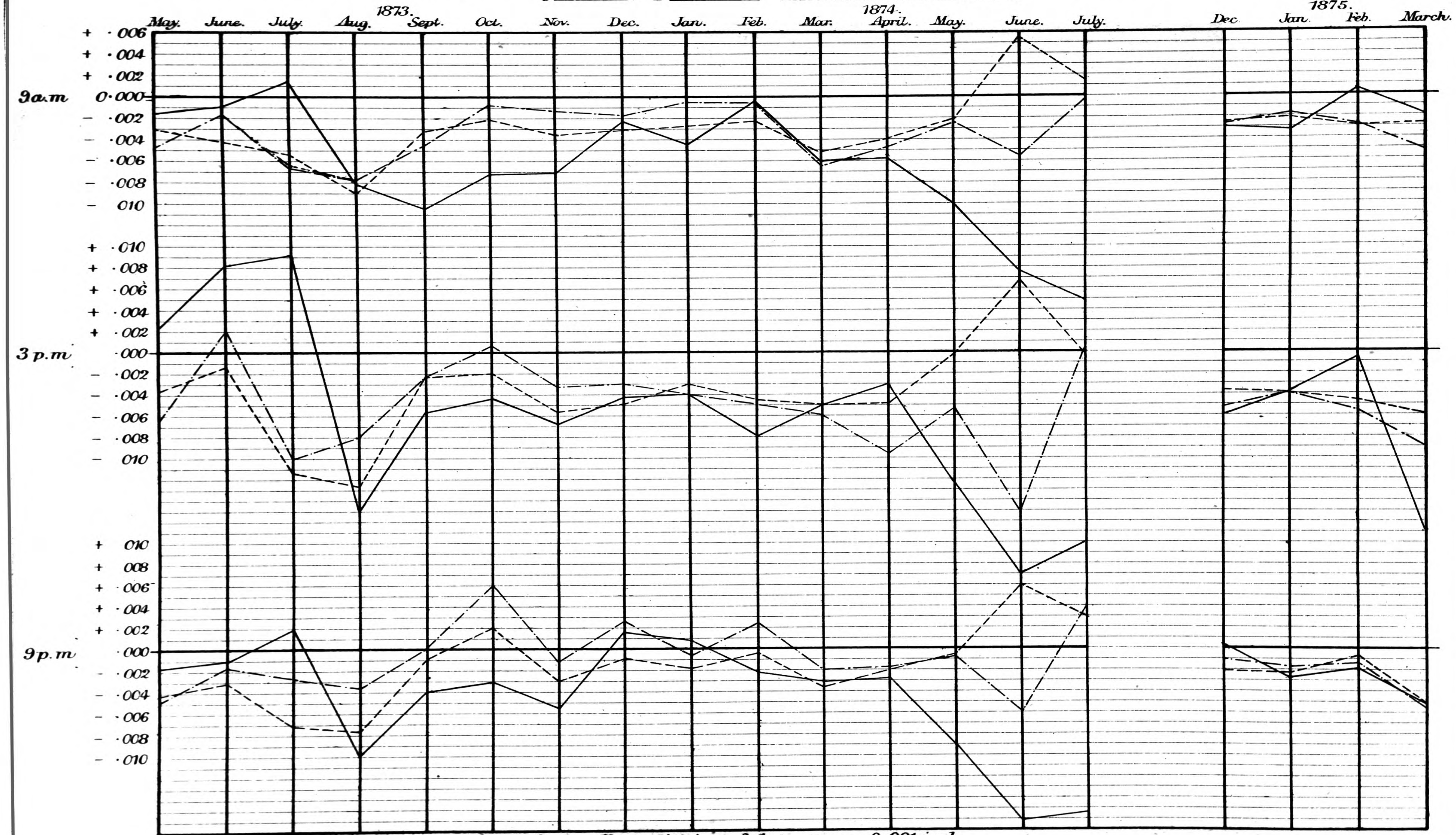
Scale: Each Division of the Paper = 0°.5 Faht.

Dangerfield, Lith. 22, Bedford St. Covent Garden.

Fig. III. Table VI.

Differences shown in the Monthly means of the Vapour Tension at Kew Observatory and at the Pagoda, taking P. (lowest stage) as zero.

O______. P______ P'- - - - - - P''_._._._.

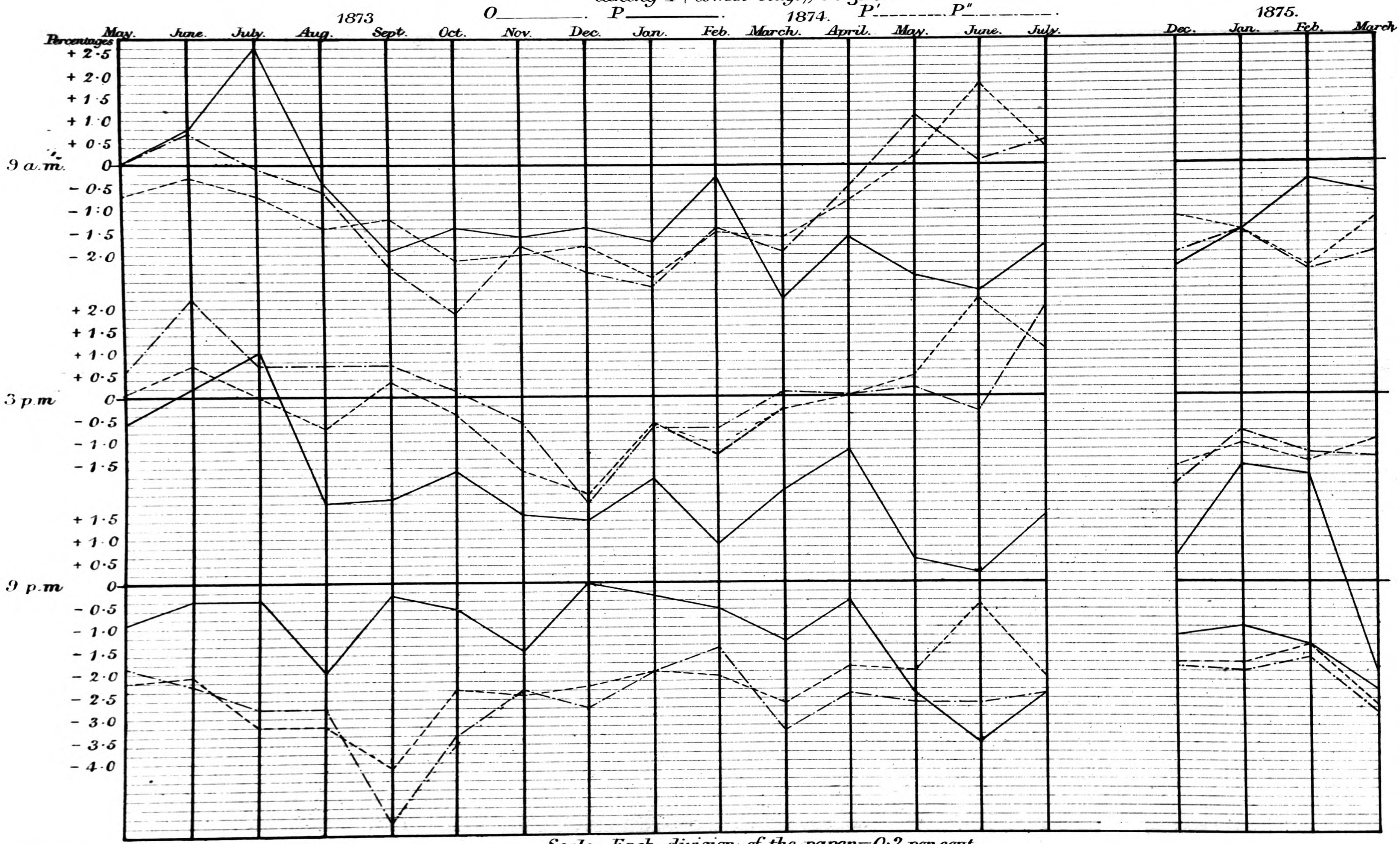


Scale: Each division of the paper = 0·001 inch.

Dangerfield. Lith. 22. Bedford S^t. Covent Garden.

Fig. IV. Table VII.

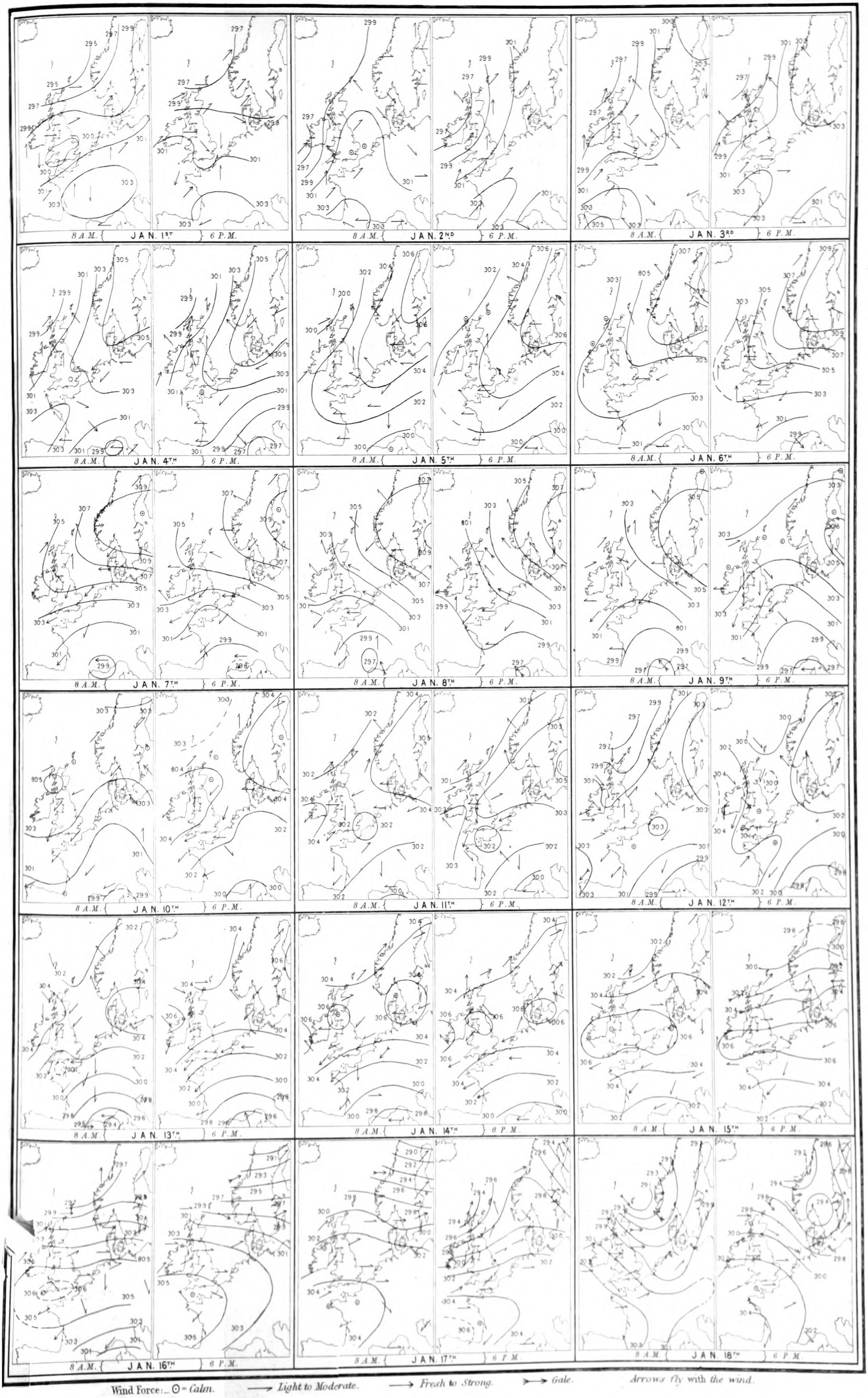
Differences shown in the Monthly means of the Relative Humidity at Kew Observatory and at the Pagoda, taking P (lowest stage,) as zero.



Scale: Each division of the paper = 0·2 per cent.

Dangerfield Lith 22 Bedford St Covent Garden

JANUARY — 1876.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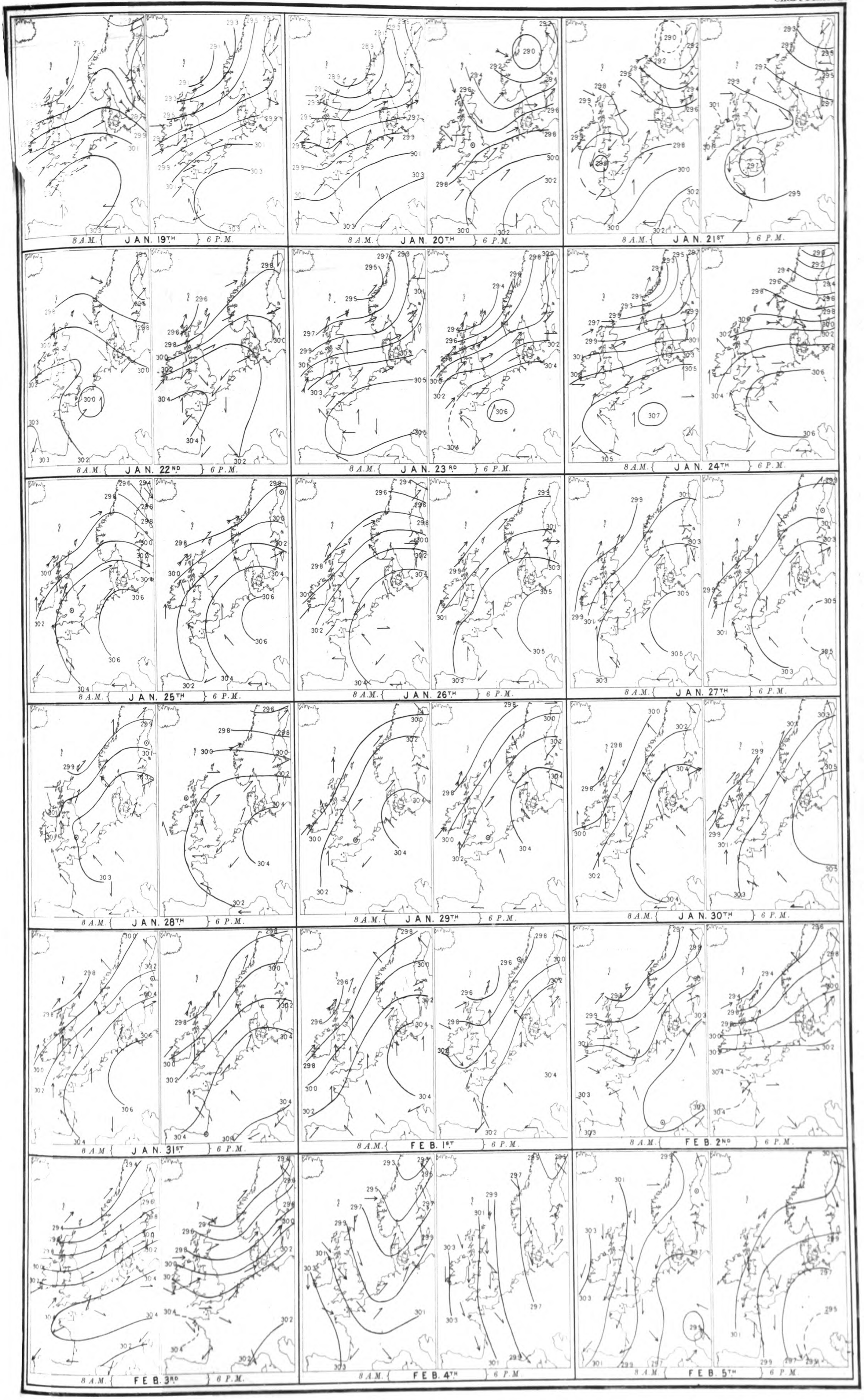
8 A.M. { JAN. 2ND } 6 P.M.
8 A.M. { JAN. 3RD } 6 P.M.
8 A.M. { JAN. 4TH } 6 P.M.
8 A.M. { JAN. 5TH } 6 P.M.
8 A.M. { JAN. 6TH } 6 P.M.
8 A.M. { JAN. 7TH } 6 P.M.
8 A.M. { JAN. 8TH } 6 P.M.
8 A.M. { JAN. 9TH } 6 P.M.
8 A.M. { JAN. 10TH } 6 P.M.
8 A.M. { JAN. 11TH } 6 P.M.
8 A.M. { JAN. 12TH } 6 P.M.
8 A.M. { JAN. 13TH } 6 P.M.
8 A.M. { JAN. 14TH } 6 P.M.
8 A.M. { JAN. 15TH } 6 P.M.
8 A.M. { JAN. 16TH } 6 P.M.
8 A.M. { JAN. 17TH } 6 P.M.
8 A.M. { JAN. 18TH } 6 P.M.

Wind Force:— ⊙ = *Calm.* ⟶ *Light to Moderate.* ⟶ *Fresh to Strong.* ⟶ *Gale.* *Arrows fly with the wind.*

JANUARY & FEBRUARY — 1876.

Chart-Plate 2.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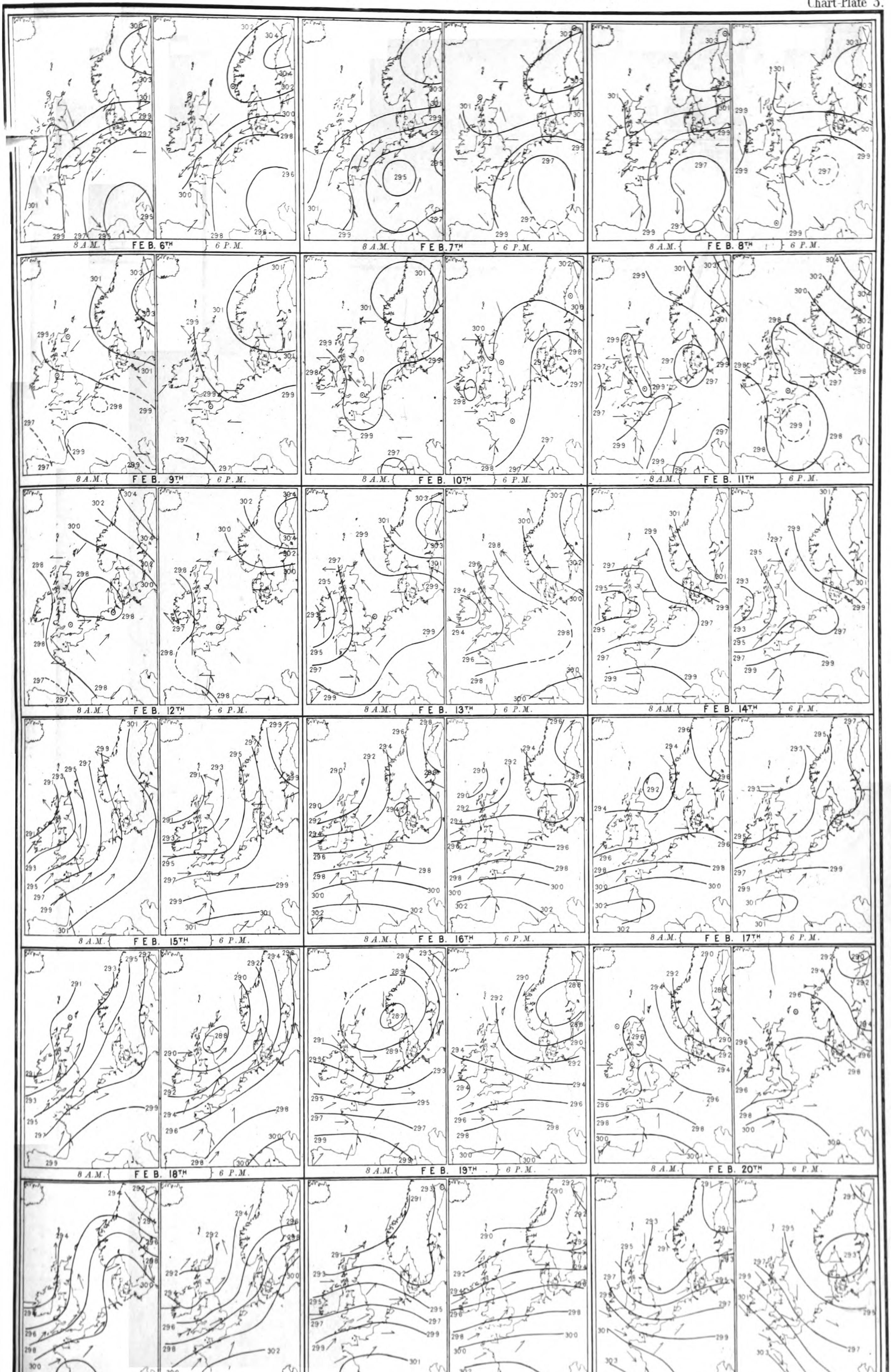
8 A.M. JAN. 20TH 6 P.M.
8 A.M. JAN. 21ST 6 P.M.
8 A.M. JAN. 22ND 6 P.M.
8 A.M. JAN. 23RD 6 P.M.
8 A.M. JAN. 24TH 6 P.M.
8 A.M. JAN. 25TH 6 P.M.
8 A.M. JAN. 26TH 6 P.M.
8 A.M. JAN. 27TH 6 P.M.
8 A.M. JAN. 28TH 6 P.M.
8 A.M. JAN. 29TH 6 P.M.
8 A.M. JAN. 30TH 6 P.M.
8 A.M. JAN. 31ST 6 P.M.
8 A.M. FEB. 1ST 6 P.M.
8 A.M. FEB. 2ND 6 P.M.
8 A.M. FEB. 3RD 6 P.M.
8 A.M. FEB. 4TH 6 P.M.
8 A.M. FEB. 5TH 6 P.M.

FEBRUARY — 1876.

Chart-Plate 3.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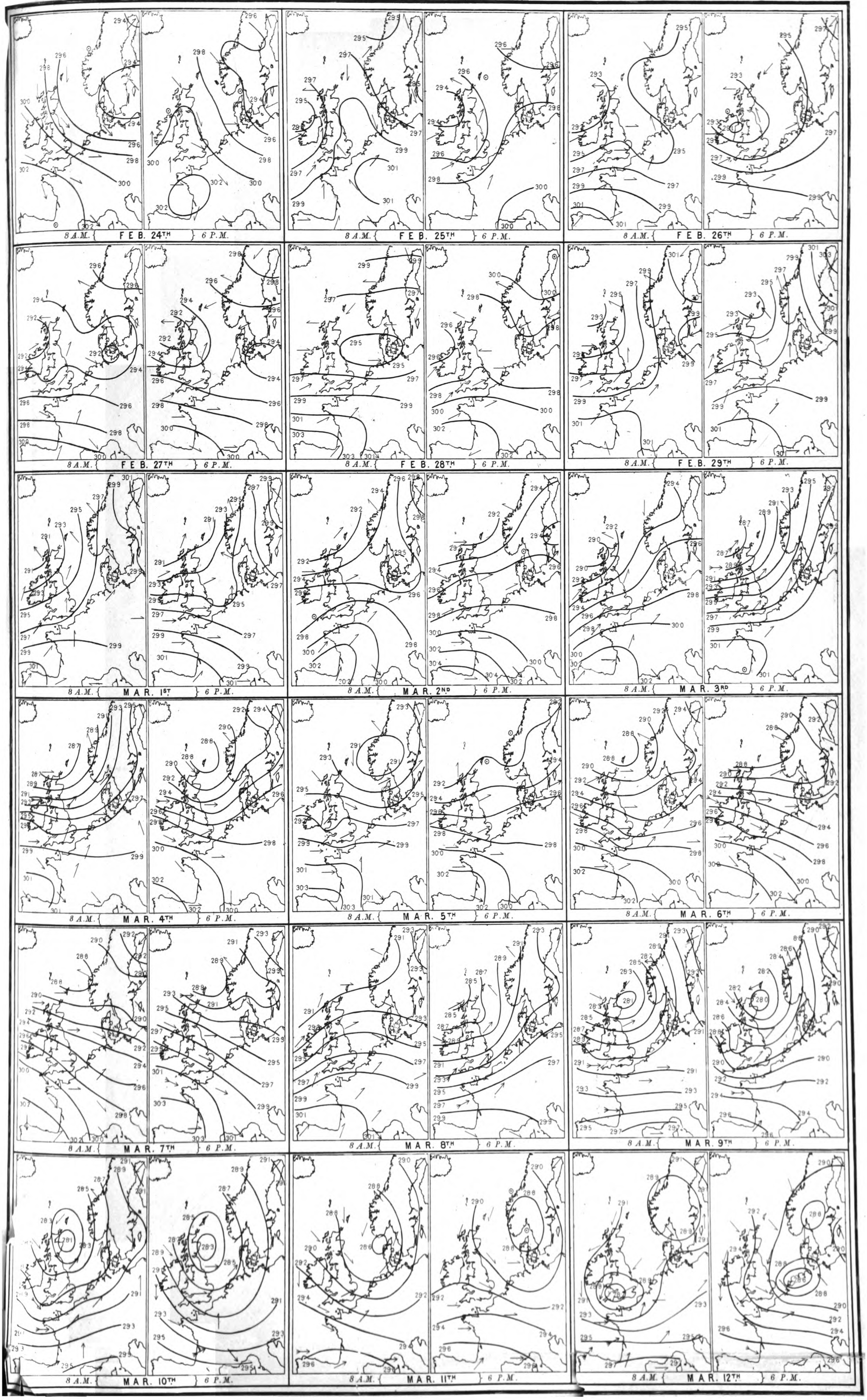
8 A.M. FEB. 7TH 6 P.M.
8 A.M. FEB. 8TH 6 P.M.
8 A.M. FEB. 9TH 6 P.M.
8 A.M. FEB. 10TH 6 P.M.
8 A.M. FEB. 11TH 6 P.M.
8 A.M. FEB. 12TH 6 P.M.
8 A.M. FEB. 13TH 6 P.M.
8 A.M. FEB. 14TH 6 P.M.
8 A.M. FEB. 15TH 6 P.M.
8 A.M. FEB. 16TH 6 P.M.
8 A.M. FEB. 17TH 6 P.M.
8 A.M. FEB. 18TH 6 P.M.
8 A.M. FEB. 19TH 6 P.M.
8 A.M. FEB. 20TH 6 P.M.
8 A.M. FEB. 21ST 6 P.M.
8 A.M. FEB. 22ND 6 P.M.
8 A.M. FEB. 23RD 6 P.M.

FEBRUARY & MARCH — 1876.

Chart-Plate 4.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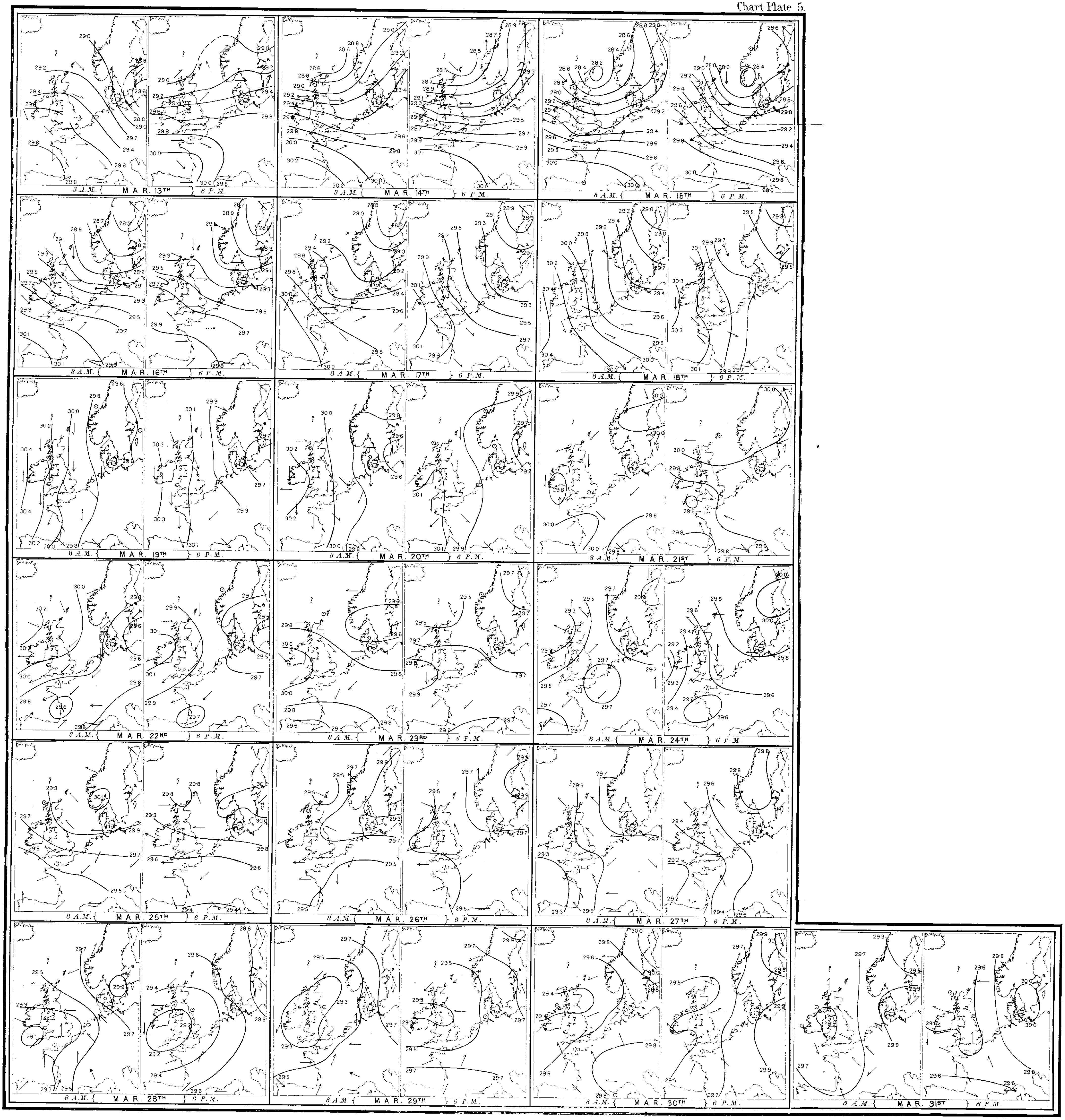
8 A.M. FEB. 25TH 6 P.M.
8 A.M. FEB. 26TH 6 P.M.
8 A.M. FEB. 27TH 6 P.M.
8 A.M. FEB. 28TH 6 P.M.
8 A.M. FEB. 29TH 6 P.M.
8 A.M. MAR. 1ST 6 P.M.
8 A.M. MAR. 2ND 6 P.M.
8 A.M. MAR. 3RD 6 P.M.
8 A.M. MAR. 4TH 6 P.M.
8 A.M. MAR. 5TH 6 P.M.
8 A.M. MAR. 6TH 6 P.M.
8 A.M. MAR. 7TH 6 P.M.
8 A.M. MAR. 8TH 6 P.M.
8 A.M. MAR. 9TH 6 P.M.
8 A.M. MAR. 10TH 6 P.M.
8 A.M. MAR. 11TH 6 P.M.
8 A.M. MAR. 12TH 6 P.M.

MARCH — 1876.

Chart Plate 5.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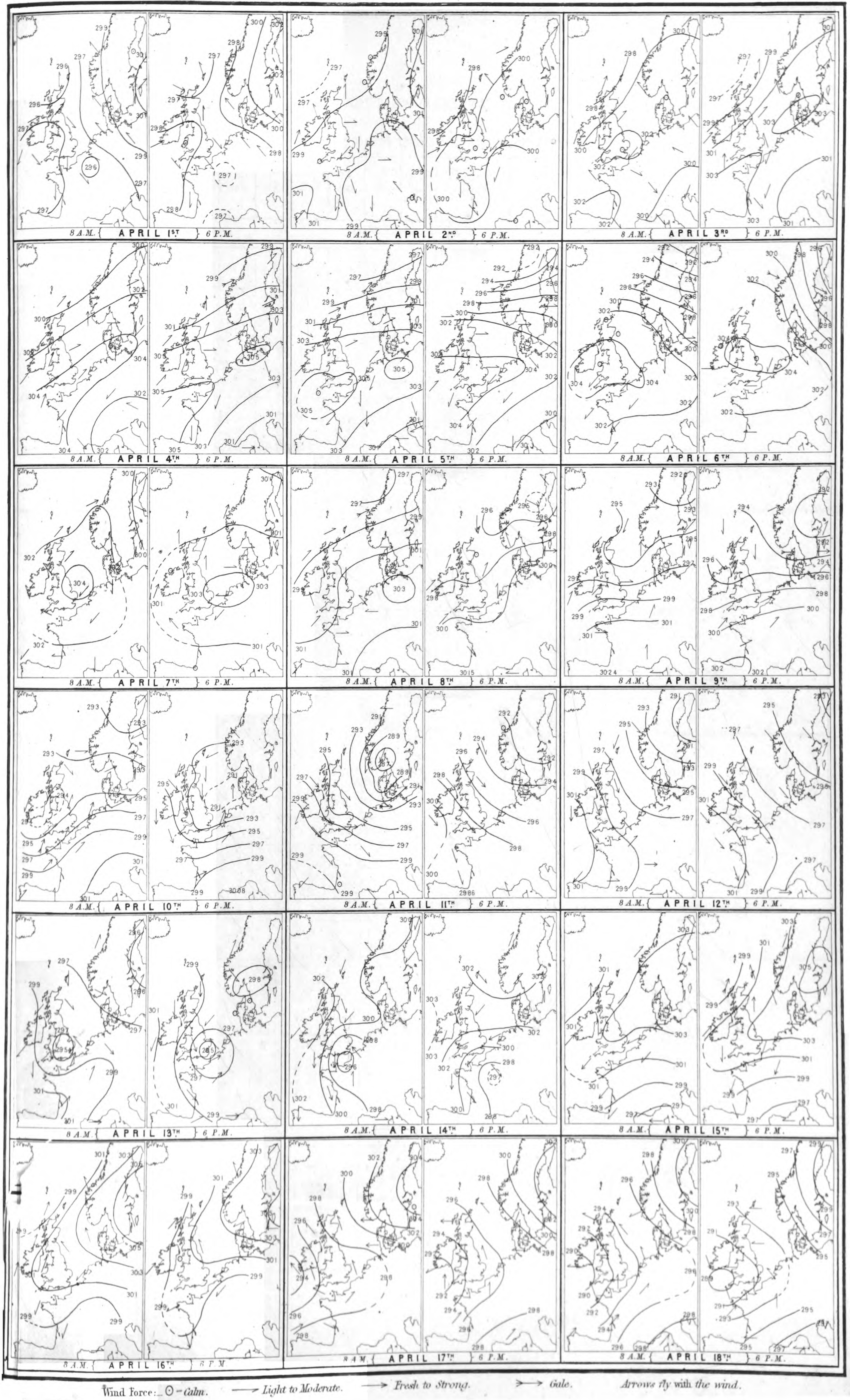
8 A.M. MAR. 14TH 6 P.M.
8 A.M. MAR. 15TH 6 P.M.
8 A.M. MAR. 16TH 6 P.M.
8 A.M. MAR. 17TH 6 P.M.
8 A.M. MAR. 18TH 6 P.M.
8 A.M. MAR. 19TH 6 P.M.
8 A.M. MAR. 20TH 6 P.M.
8 A.M. MAR. 21ST 6 P.M.
8 A.M. MAR. 22ND 6 P.M.
8 A.M. MAR. 23RD 6 P.M.
8 A.M. MAR. 24TH 6 P.M.
8 A.M. MAR. 25TH 6 P.M.
8 A.M. MAR. 26TH 6 P.M.
8 A.M. MAR. 27TH 6 P.M.
8 A.M. MAR. 28TH 6 P.M.
8 A.M. MAR. 29TH 6 P.M.
8 A.M. MAR. 30TH 6 P.M.
8 A.M. MAR. 31ST 6 P.M.

Chart Plate 6.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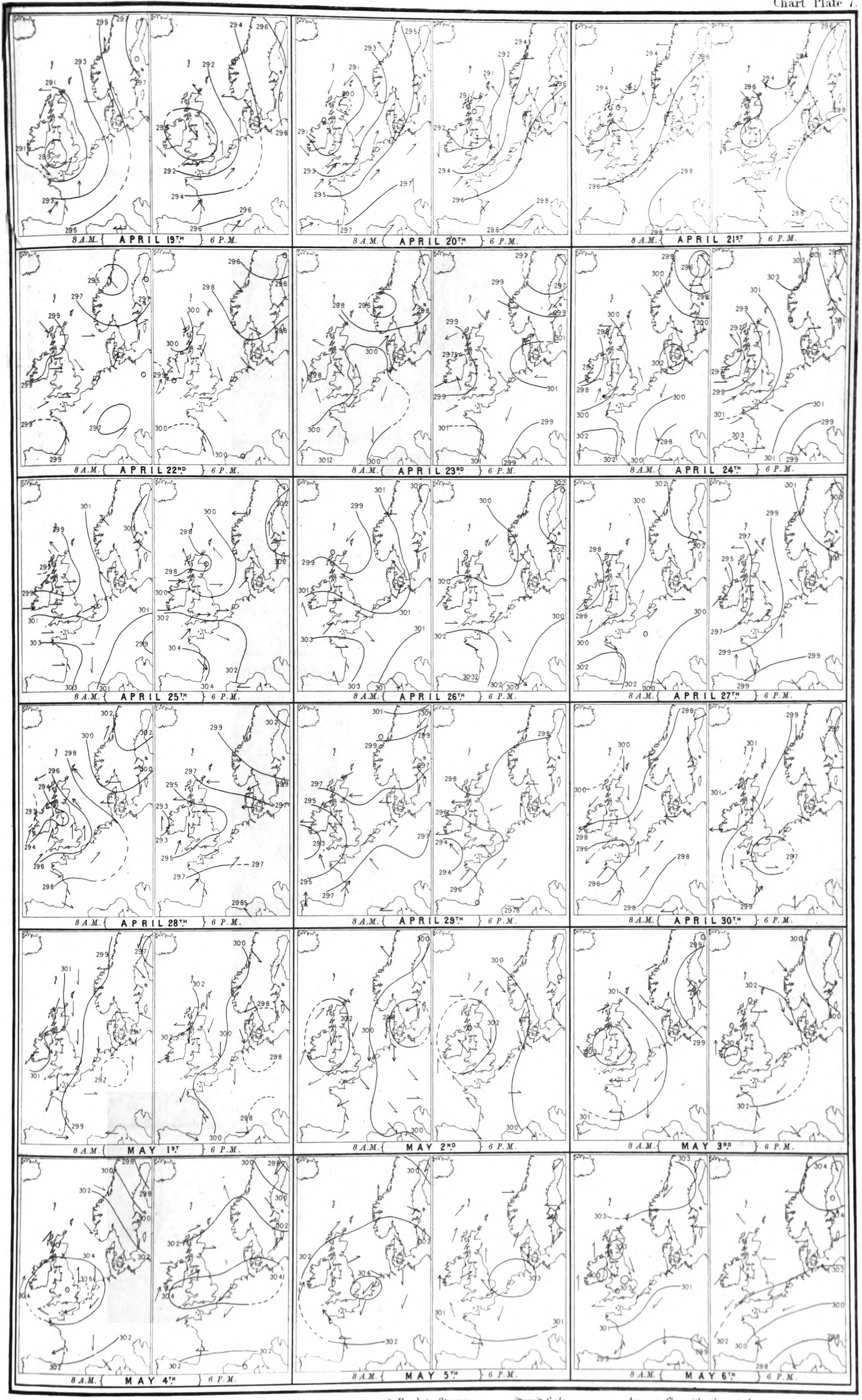
8 A.M. { APRIL 2ND } 6 P.M.
8 A.M. { APRIL 3RD } 6 P.M.
8 A.M. { APRIL 4TH } 6 P.M.
8 A.M. { APRIL 5TH } 6 P.M.
8 A.M. { APRIL 6TH } 6 P.M.
8 A.M. { APRIL 7TH } 6 P.M.
8 A.M. { APRIL 8TH } 6 P.M.
8 A.M. { APRIL 9TH } 6 P.M.
8 A.M. { APRIL 10TH } 6 P.M.
8 A.M. { APRIL 11TH } 6 P.M.
8 A.M. { APRIL 12TH } 6 P.M.
8 A.M. { APRIL 13TH } 6 P.M.
8 A.M. { APRIL 14TH } 6 P.M.
8 A.M. { APRIL 15TH } 6 P.M.
8 A.M. { APRIL 16TH } 6 P.M.
8 A.M. { APRIL 17TH } 6 P.M.
8 A.M. { APRIL 18TH } 6 P.M.

Wind Force: ⊙ - Calm. → Light to Moderate. → Fresh to Strong. → Gale. Arrows fly with the wind.

APRIL & MAY — 1876.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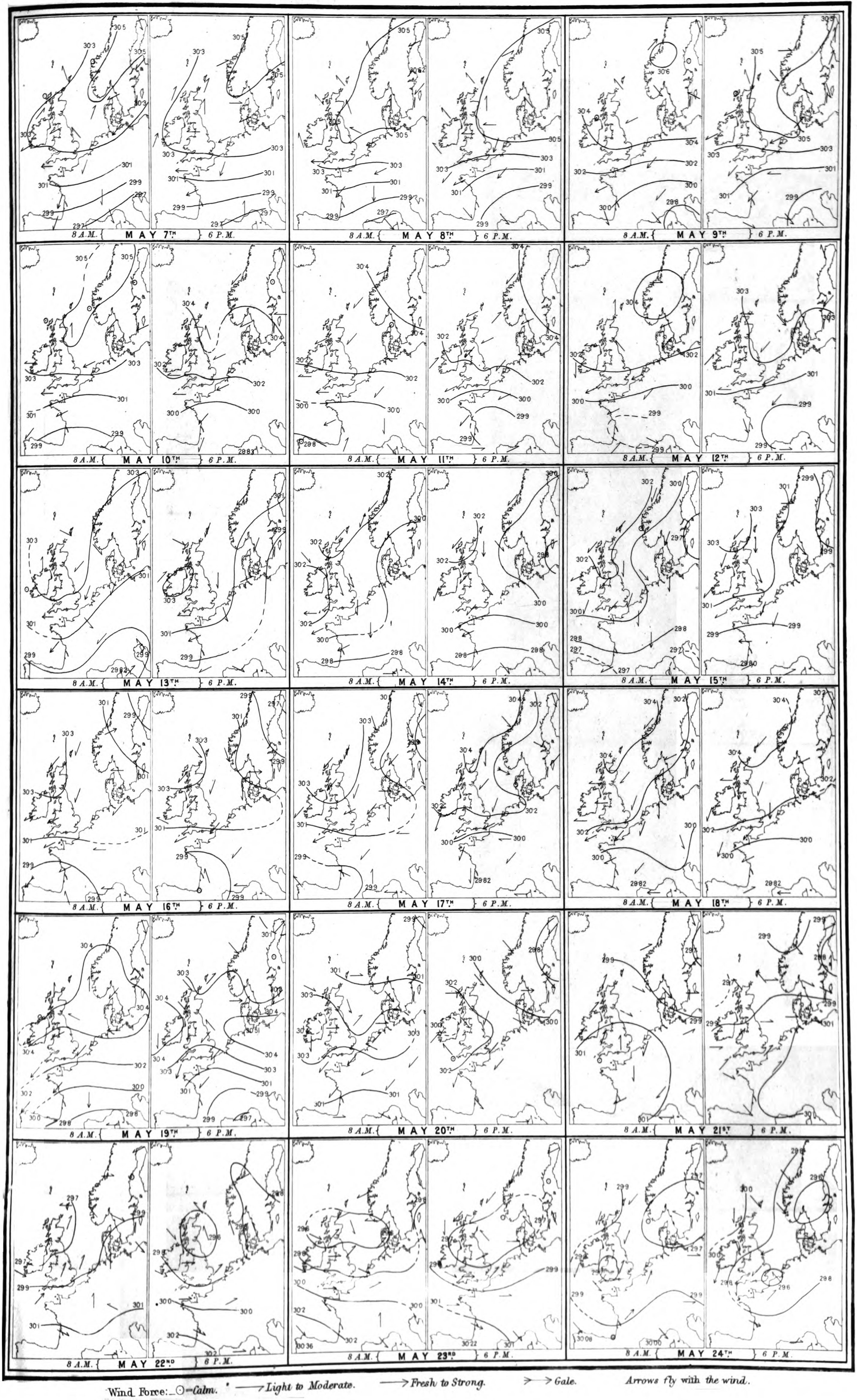
8 A.M. { APRIL 21ST } 6 P.M.
8 A.M. { APRIL 22ND } 6 P.M.
8 A.M. { APRIL 23RD } 6 P.M.
8 A.M. { APRIL 24TH } 6 P.M.
8 A.M. { APRIL 25TH } 6 P.M.
8 A.M. { APRIL 26TH } 6 P.M.
8 A.M. { APRIL 27TH } 6 P.M.
8 A.M. { APRIL 28TH } 6 P.M.
8 A.M. { APRIL 29TH } 6 P.M.
8 A.M. { APRIL 30TH } 6 P.M.
8 A.M. { MAY 1ST } 6 P.M.
8 A.M. { MAY 2ND } 6 P.M.
8 A.M. { MAY 3RD } 6 P.M.
8 A.M. { MAY 4TH } 6 P.M.
8 A.M. { MAY 5TH } 6 P.M.
8 A.M. { MAY 6TH } 6 P.M.

Wind Force: ⊙ — Calm. ⟶ Light to Moderate. ⟶ Fresh to Strong. ⟶ Gale. Arrows fly with the wind.

MAY ——— 1876.

Chart Plate 8.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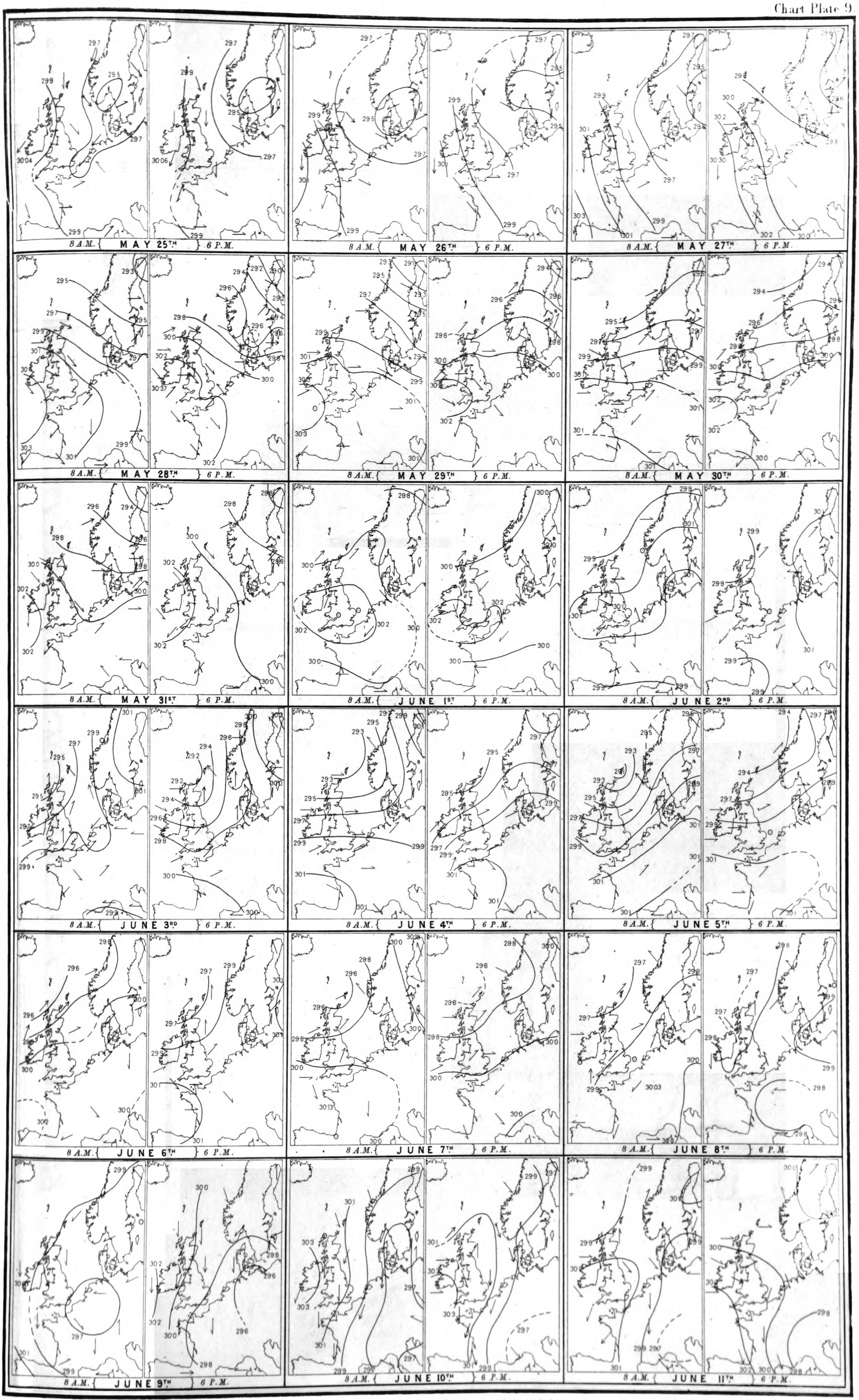
8 A.M. MAY 9TH 6 P.M.
8 A.M. MAY 10TH 6 P.M.
8 A.M. MAY 11TH 6 P.M.
8 A.M. MAY 12TH 6 P.M.
8 A.M. MAY 13TH 6 P.M.
8 A.M. MAY 14TH 6 P.M.
8 A.M. MAY 15TH 6 P.M.
8 A.M. MAY 16TH 6 P.M.
8 A.M. MAY 17TH 6 P.M.
8 A.M. MAY 18TH 6 P.M.
8 A.M. MAY 19TH 6 P.M.
8 A.M. MAY 20TH 6 P.M.
8 A.M. MAY 21ST 6 P.M.
8 A.M. MAY 22ND 6 P.M.
8 A.M. MAY 23RD 6 P.M.
8 A.M. MAY 24TH 6 P.M.

Wind Force:—⊙=Calm. → *Light to Moderate.* → *Fresh to Strong.* → *Gale.* *Arrows fly with the wind.*

MAY & JUNE ——— 1876.

Chart Plate 9.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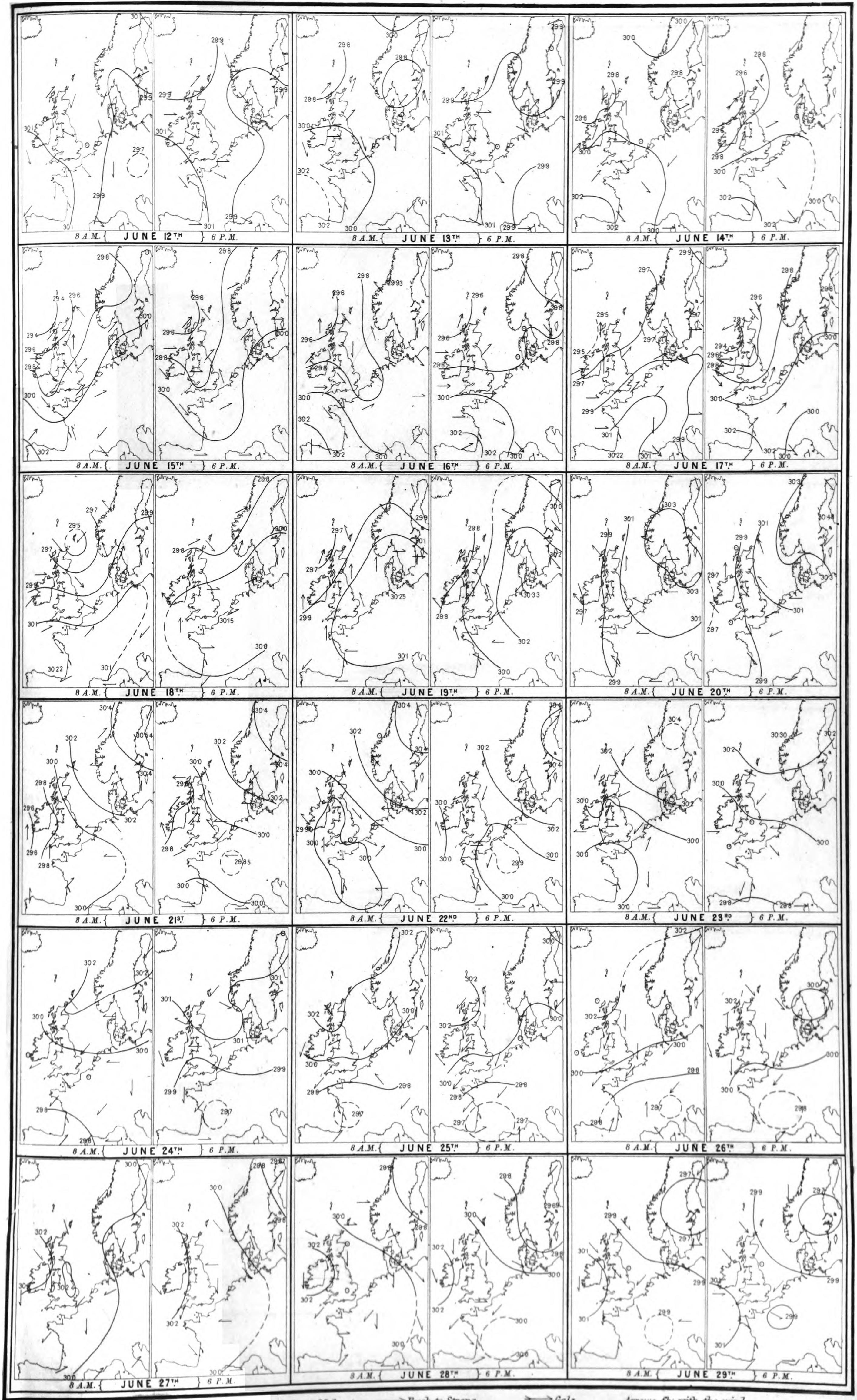
8 A.M. MAY 27TH 6 P.M.
8 A.M. MAY 28TH 6 P.M.
8 A.M. MAY 29TH 6 P.M.
8 A.M. MAY 30TH 6 P.M.
8 A.M. MAY 31ST 6 P.M.
8 A.M. JUNE 1ST 6 P.M.
8 A.M. JUNE 2ND 6 P.M.
8 A.M. JUNE 3RD 6 P.M.
8 A.M. JUNE 4TH 6 P.M.
8 A.M. JUNE 5TH 6 P.M.
8 A.M. JUNE 6TH 6 P.M.
8 A.M. JUNE 7TH 6 P.M.
8 A.M. JUNE 8TH 6 P.M.
8 A.M. JUNE 9TH 6 P.M.
8 A.M. JUNE 10TH 6 P.M.
8 A.M. JUNE 11TH 6 P.M.

Wind Force: ⊙ = Calm. → Light to Moderate. → Fresh to Strong. → Gale. Arrows fly with the wind.

JUNE —— 1876.

Chart Plate 10.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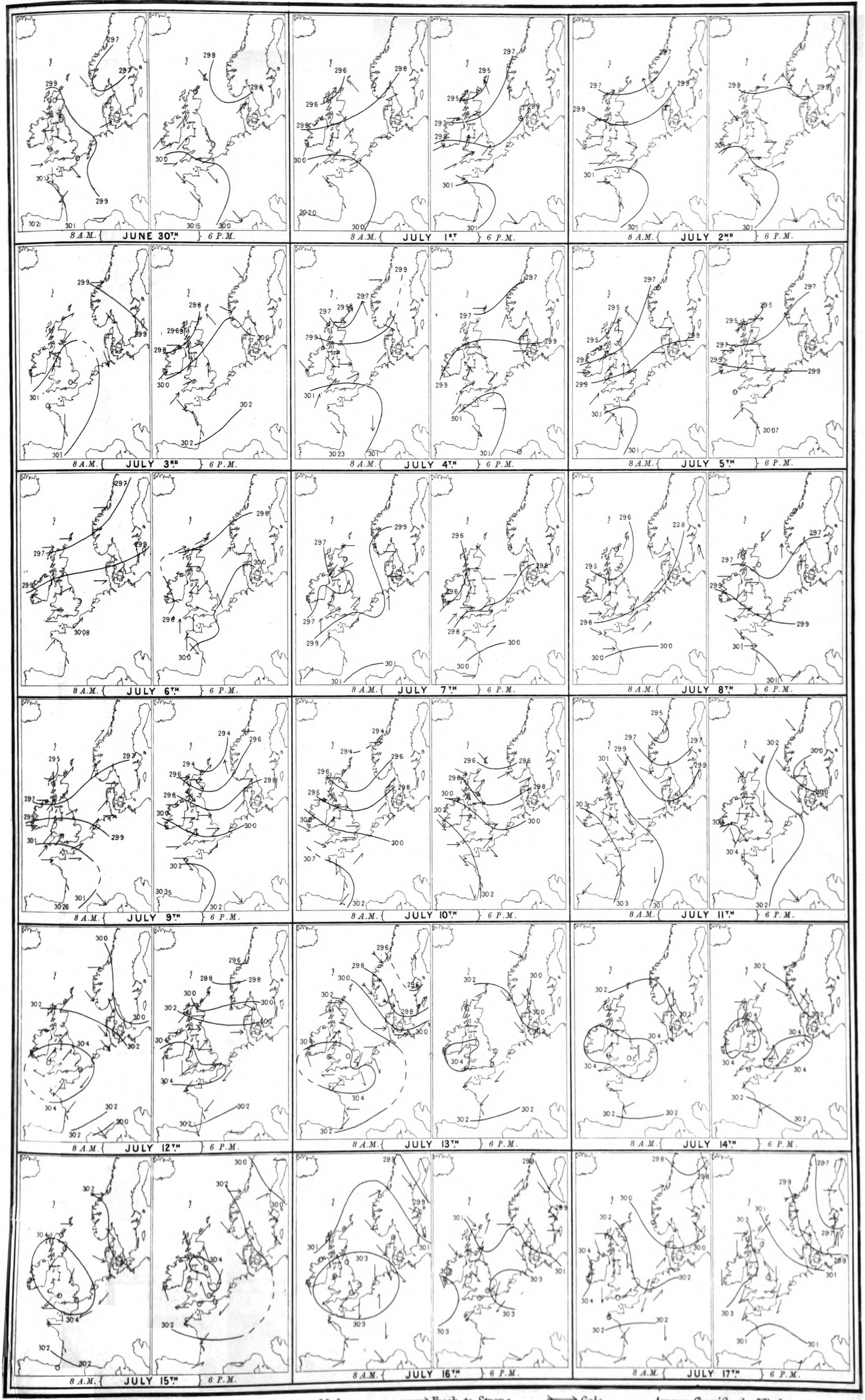
8 A.M. { JUNE 13TH } 6 P.M.
8 A.M. { JUNE 14TH } 6 P.M.
8 A.M. { JUNE 15TH } 6 P.M.
8 A.M. { JUNE 16TH } 6 P.M.
8 A.M. { JUNE 17TH } 6 P.M.
8 A.M. { JUNE 18TH } 6 P.M.
8 A.M. { JUNE 19TH } 6 P.M.
8 A.M. { JUNE 20TH } 6 P.M.
8 A.M. { JUNE 21ST } 6 P.M.
8 A.M. { JUNE 22ND } 6 P.M.
8 A.M. { JUNE 23RD } 6 P.M.
8 A.M. { JUNE 24TH } 6 P.M.
8 A.M. { JUNE 25TH } 6 P.M.
8 A.M. { JUNE 26TH } 6 P.M.
8 A.M. { JUNE 27TH } 6 P.M.
8 A.M. { JUNE 28TH } 6 P.M.
8 A.M. { JUNE 29TH } 6 P.M.

Wind Force: ⊙ — *Calm.* → *Light to Moderate.* → *Fresh to Strong.* → *Gale.* *Arrows fly with the wind.*

JUNE —— JULY —— 1876.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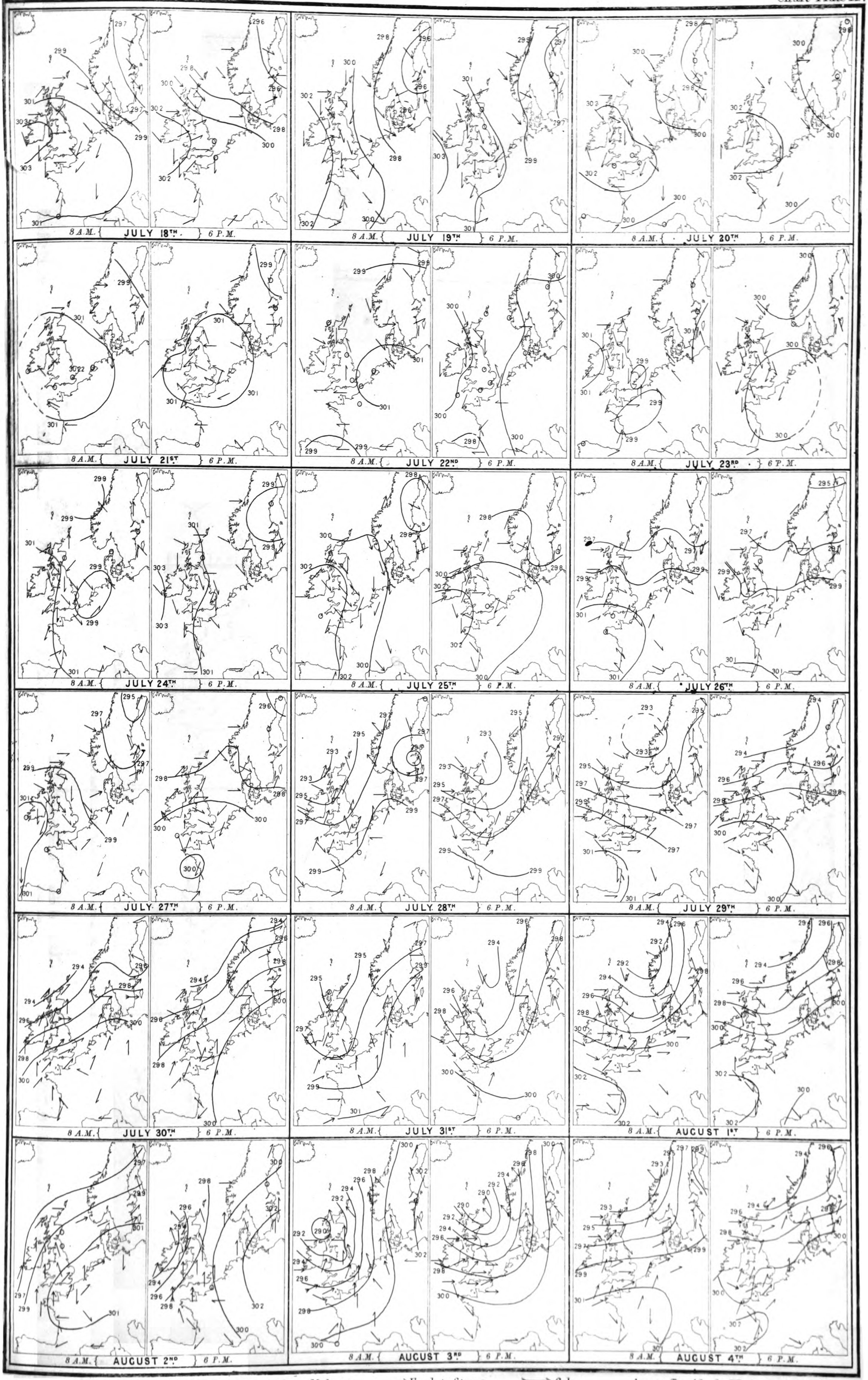
8 A.M. { JULY 4TH } 6 P.M.
8 A.M. { JULY 5TH } 6 P.M.
8 A.M. { JULY 6TH } 6 P.M.
8 A.M. { JULY 7TH } 6 P.M.
8 A.M. { JULY 8TH } 6 P.M.
8 A.M. { JULY 9TH } 6 P.M.
8 A.M. { JULY 10TH } 6 P.M.
8 A.M. { JULY 11TH } 6 P.M.
8 A.M. { JULY 12TH } 6 P.M.
8 A.M. { JULY 13TH } 6 P.M.
8 A.M. { JULY 14TH } 6 P.M.
8 A.M. { JULY 15TH } 6 P.M.
8 A.M. { JULY 16TH } 6 P.M.
8 A.M. { JULY 17TH } 6 P.M.

Wind Force — ⊙ — *Calm.* ⟶ *Light to Moderate.* ⟶ *Fresh to Strong.* ⟶ *Gale.* *Arrows fly with the Wind.*

JULY—AUGUST—1876.

Chart Plate 12.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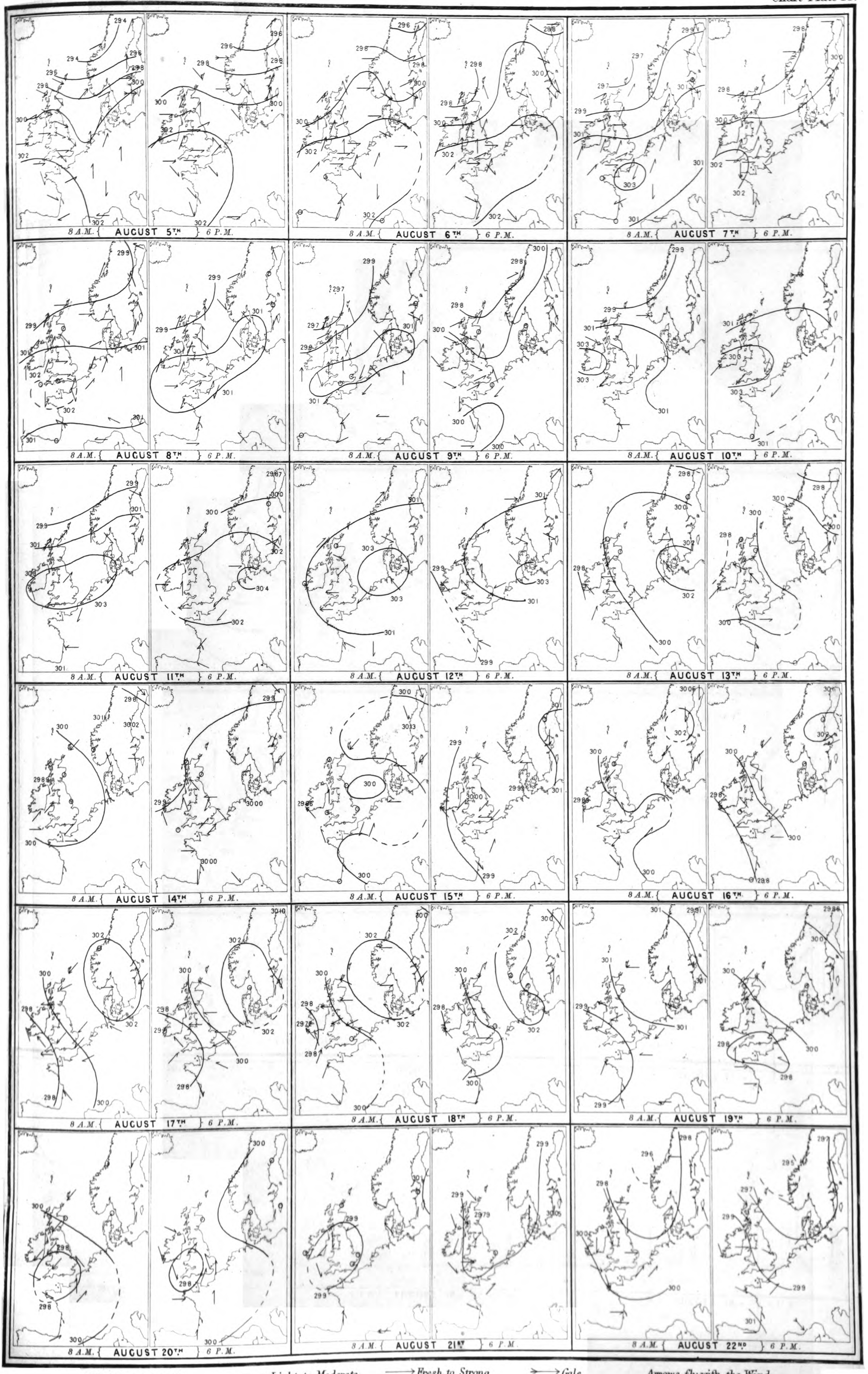
8 A.M. JULY 22ND 6 P.M.
8 A.M. JULY 23RD 6 P.M.
8 A.M. JULY 24TH 6 P.M.
8 A.M. JULY 25TH 6 P.M.
8 A.M. JULY 26TH 6 P.M.
8 A.M. JULY 27TH 6 P.M.
8 A.M. JULY 28TH 6 P.M.
8 A.M. JULY 29TH 6 P.M.
8 A.M. JULY 30TH 6 P.M.
8 A.M. JULY 31ST 6 P.M.
8 A.M. AUGUST 1ST 6 P.M.
8 A.M. AUGUST 2ND 6 P.M.
8 A.M. AUGUST 3RD 6 P.M.
8 A.M. AUGUST 4TH 6 P.M.

Wind Force :⊙—Calm. ⟶ Light to Moderate. ⟶ Fresh to Strong. ⟶ Gale. Arrows fly with the Wind.

AUGUST — 1876.

Chart Plate 13.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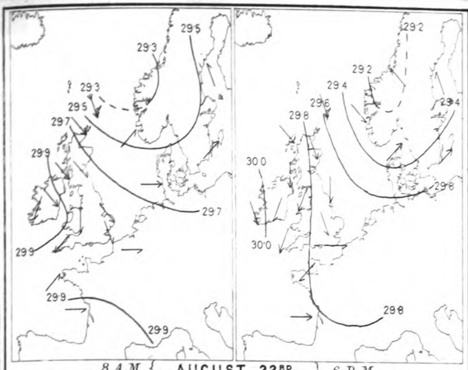
8 A.M. { AUGUST 9TH } 6 P.M.
8 A.M. { AUGUST 10TH } 6 P.M.
8 A.M. { AUGUST 11TH } 6 P.M.
8 A.M. { AUGUST 12TH } 6 P.M.
8 A.M. { AUGUST 13TH } 6 P.M.
8 A.M. { AUGUST 14TH } 6 P.M.
8 A.M. { AUGUST 15TH } 6 P.M.
8 A.M. { AUGUST 16TH } 6 P.M.
8 A.M. { AUGUST 17TH } 6 P.M.
8 A.M. { AUGUST 18TH } 6 P.M.
8 A.M. { AUGUST 19TH } 6 P.M.
8 A.M. { AUGUST 20TH } 6 P.M.
8 A.M. { AUGUST 21ST } 6 P.M.
8 A.M. { AUGUST 22ND } 6 P.M.

Wind Force :- ⊙ *Calm.* → *Light to Moderate.* → *Fresh to Strong.* → *Gale.* *Arrows fly with the Wind.*

AUGUST — SEPTEMBER — 1876.

Chart Plate 14.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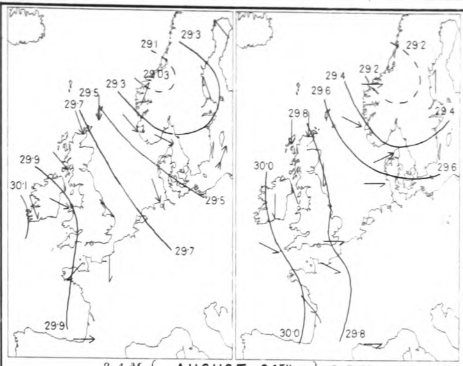
29·4
29·8
30·0
29·8

8 A.M. { AUGUST 23RD } 6 P.M.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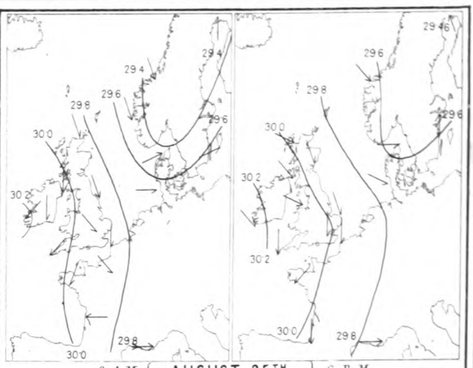
29·6
30·0
29·8

8 A.M. { AUGUST 24TH } 6 P.M.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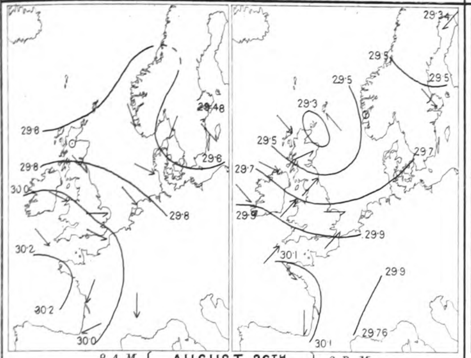
8 A.M. { AUGUST 25TH } 6 P.M.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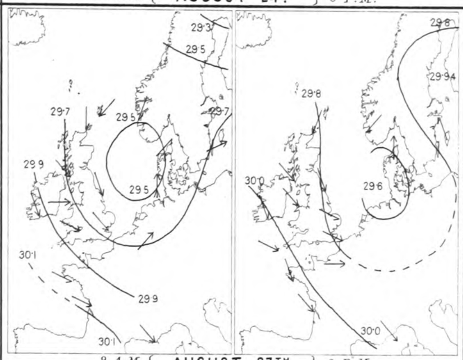
8 A.M. { AUGUST 26TH } 6 P.M.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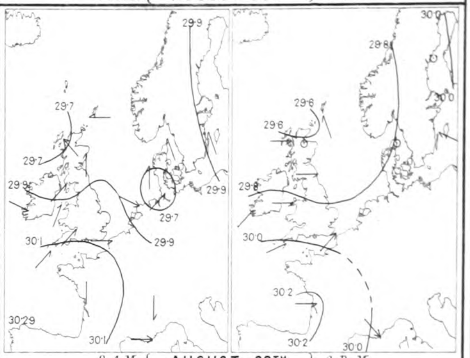
8 A.M. { AUGUST 27TH } 6 P.M.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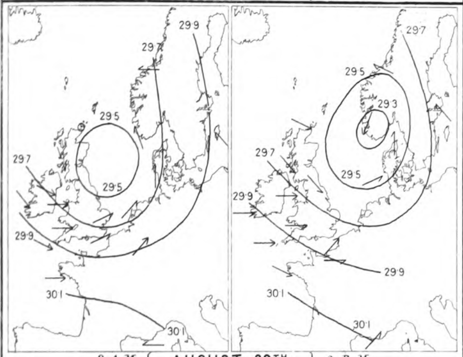
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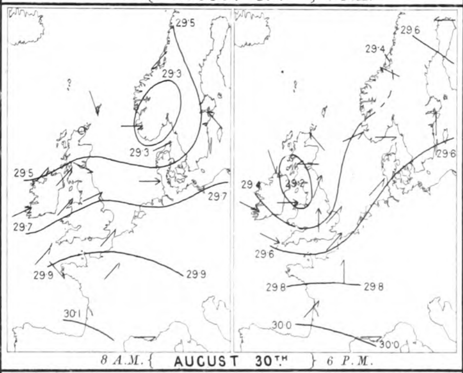
8 A.M. { AUGUST 29TH } 6 P.M.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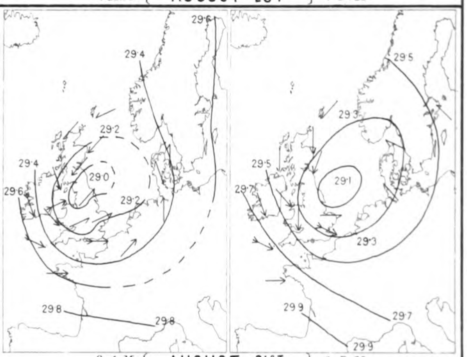
8 A.M. { AUGUST 30TH } 6 P.M.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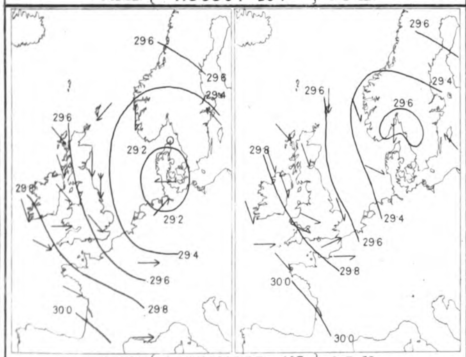
8 A.M. { AUGUST 31ST } 6 P.M.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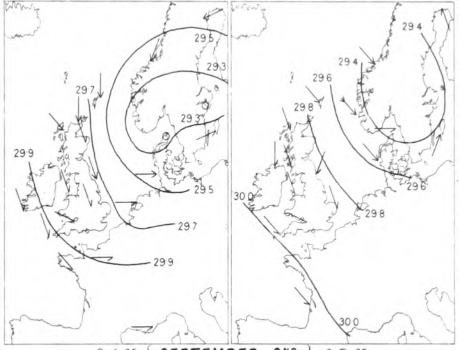
8 A.M. { SEPTEMBER 1ST } 6 P.M.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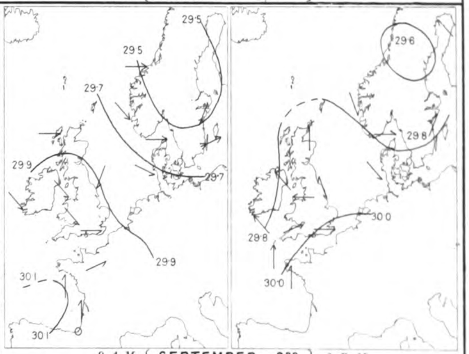
8 A.M. { SEPTEMBER 2ND } 6 P.M.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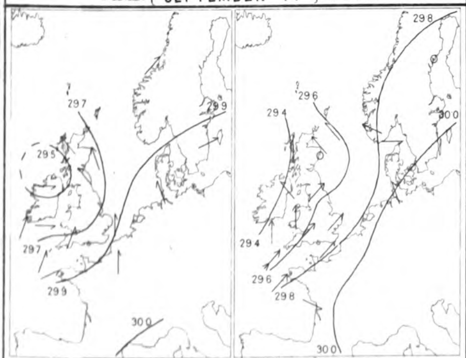
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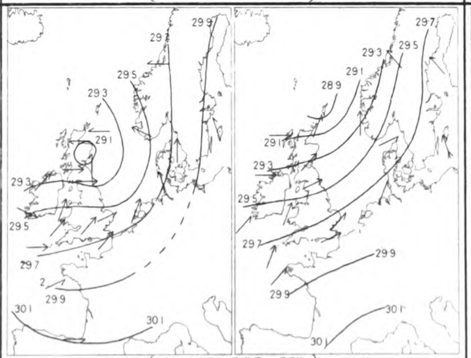
8 A.M. { SEPTEMBER 4TH } 6 P.M.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28·9
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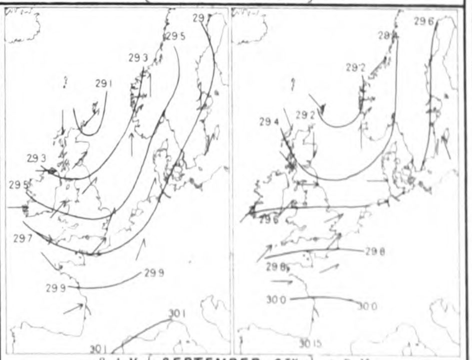
8 A.M. { SEPTEMBER 5TH } 6 P.M.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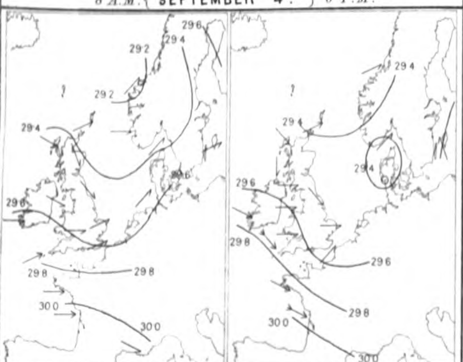
8 A.M. { SEPTEMBER 6TH } 6 P.M.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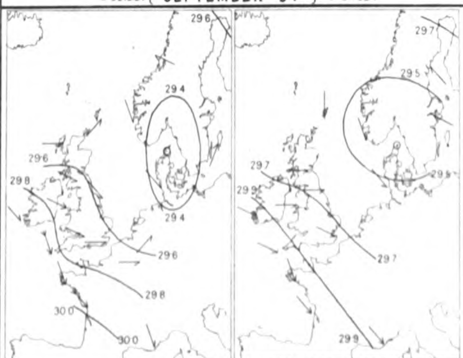
8 A.M. { SEPTEMBER 7TH } 6 P.M.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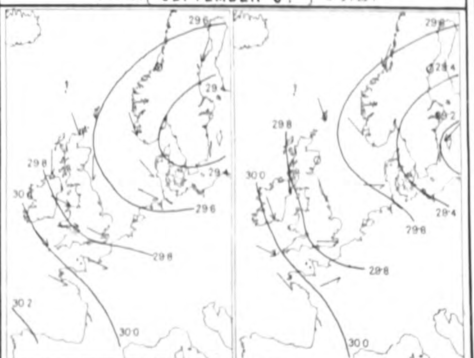
8 A.M. { SEPTEMBER 8TH } 6 P.M.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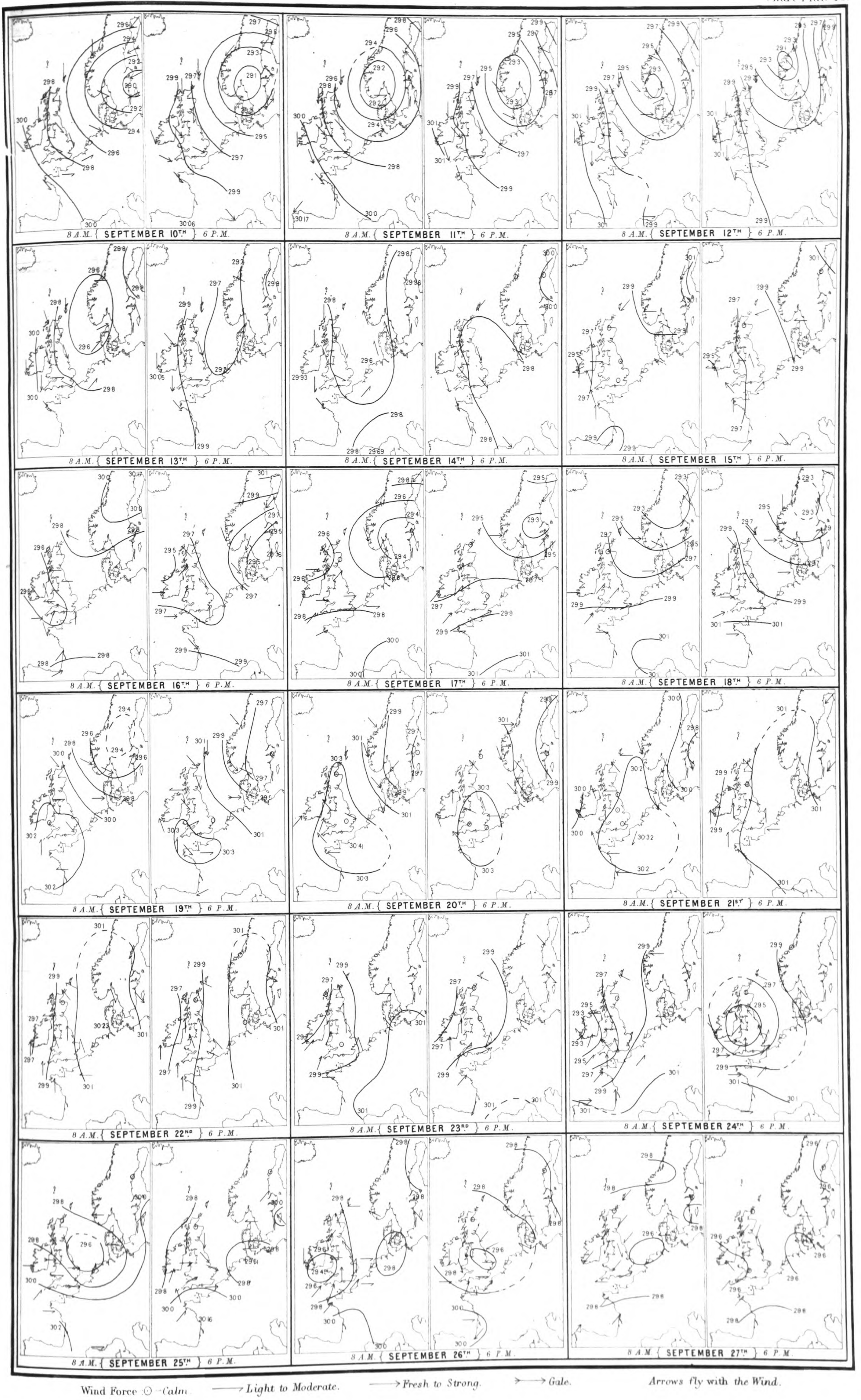
29·6
29·8
30·0

8 A.M. { SEPTEMBER 9TH } 6 P.M.

Wind Force_ ⊙–*Calm.* ⟶ *Light to Moderate.* ⟶ *Fresh to Strong.* ⟶ *Gale.* *Arrows fly with the Wind.*

SEPTEMBER — 1876.

Chart Plate 15.



8 A.M. { SEPTEMBER 10TH } 6 P.M.

8 A.M. { SEPTEMBER 11TH } 6 P.M.

8 A.M. { SEPTEMBER 12TH } 6 P.M.

8 A.M. { SEPTEMBER 13TH } 6 P.M.

8 A.M. { SEPTEMBER 14TH } 6 P.M.

8 A.M. { SEPTEMBER 15TH } 6 P.M.

8 A.M. { SEPTEMBER 16TH } 6 P.M.

8 A.M. { SEPTEMBER 17TH } 6 P.M.

8 A.M. { SEPTEMBER 18TH } 6 P.M.

8 A.M. { SEPTEMBER 19TH } 6 P.M.

8 A.M. { SEPTEMBER 20TH } 6 P.M.

8 A.M. { SEPTEMBER 21ST } 6 P.M.

8 A.M. { SEPTEMBER 22ND } 6 P.M.

8 A.M. { SEPTEMBER 23RD } 6 P.M.

8 A.M. { SEPTEMBER 24TH } 6 P.M.

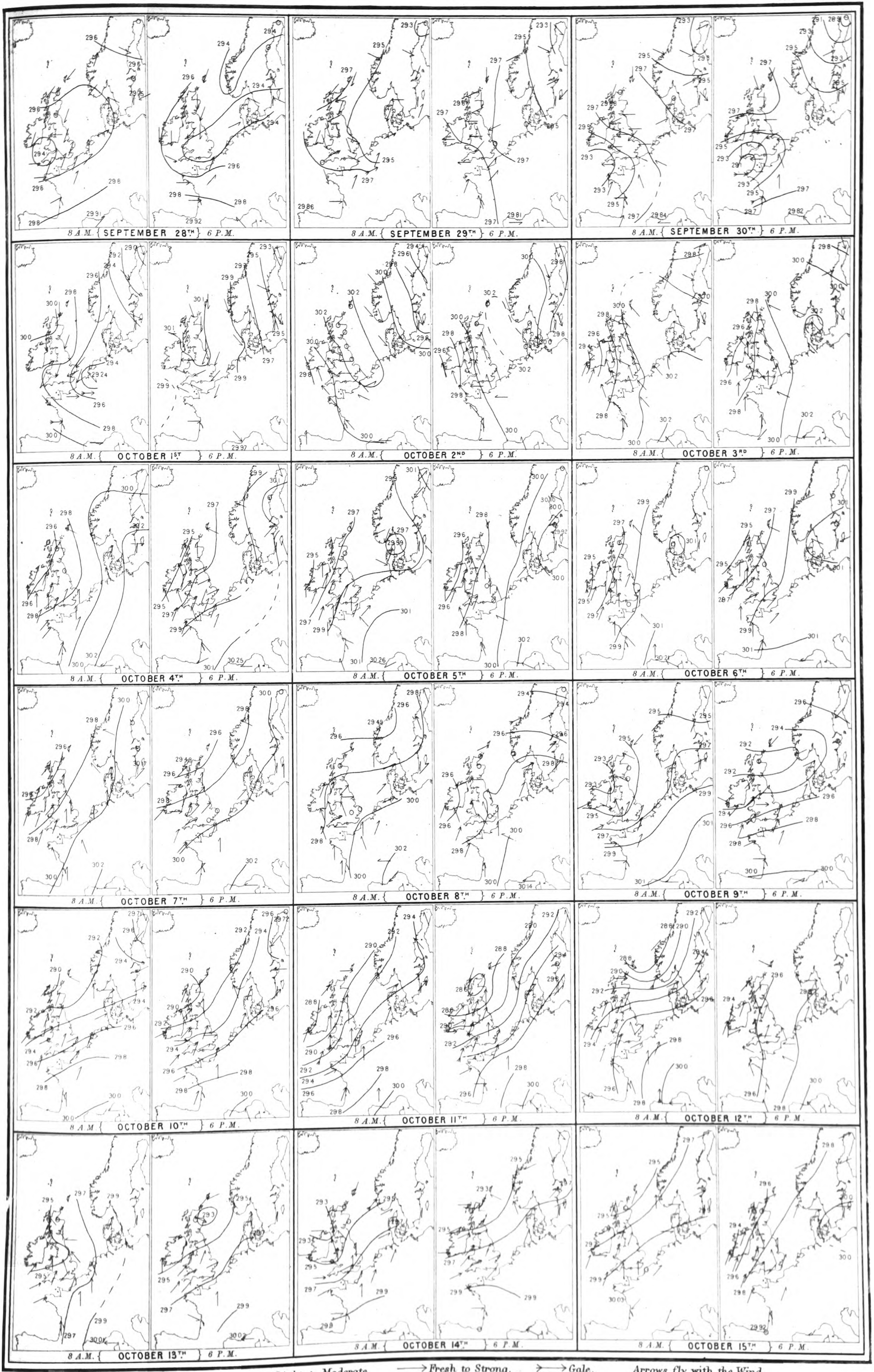
8 A.M. { SEPTEMBER 25TH } 6 P.M.

8 A.M. { SEPTEMBER 26TH } 6 P.M.

8 A.M. { SEPTEMBER 27TH } 6 P.M.

Wind Force ⊙ = Calm ⟶ Light to Moderate. ⟶ Fresh to Strong. ⇸ Gale. Arrows fly with the Wind.

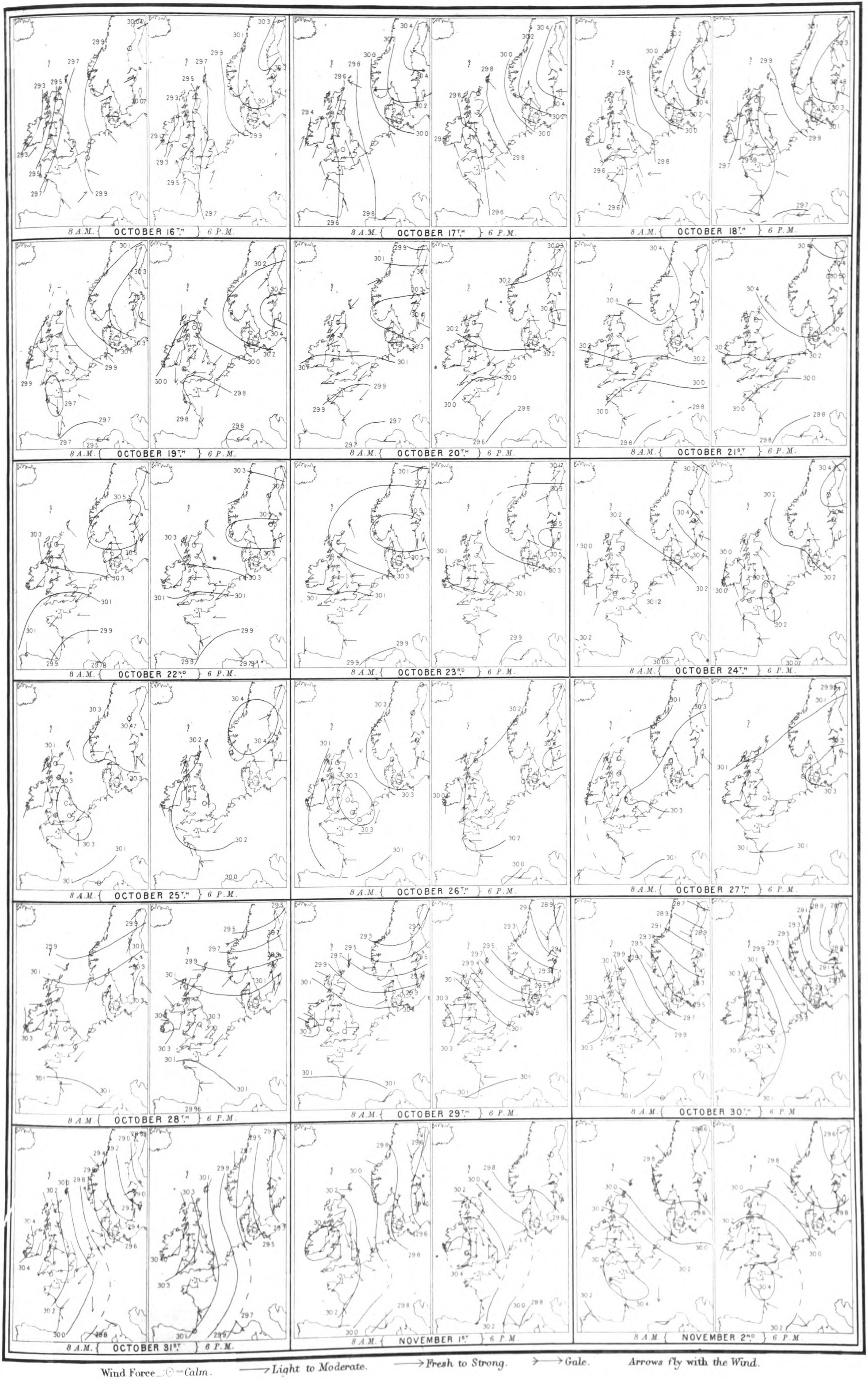
SEPTEMBER & OCTOBER —— 1876.


8 A.M. { SEPTEMBER 28TH } 6 P.M.
8 A.M. { SEPTEMBER 29TH } 6 P.M.
8 A.M. { SEPTEMBER 30TH } 6 P.M.
8 A.M. { OCTOBER 1ST } 6 P.M.
8 A.M. { OCTOBER 2ND } 6 P.M.
8 A.M. { OCTOBER 3RD } 6 P.M.
8 A.M. { OCTOBER 4TH } 6 P.M.
8 A.M. { OCTOBER 5TH } 6 P.M.
8 A.M. { OCTOBER 6TH } 6 P.M.
8 A.M. { OCTOBER 7TH } 6 P.M.
8 A.M. { OCTOBER 8TH } 6 P.M.
8 A.M. { OCTOBER 9TH } 6 P.M.
8 A.M. { OCTOBER 10TH } 6 P.M.
8 A.M. { OCTOBER 11TH } 6 P.M.
8 A.M. { OCTOBER 12TH } 6 P.M.
8 A.M. { OCTOBER 13TH } 6 P.M.
8 A.M. { OCTOBER 14TH } 6 P.M.
8 A.M. { OCTOBER 15TH } 6 P.M.

Wind Force _ ⊙ = *Calm.* → *Light to Moderate.* → *Fresh to Strong.* → *Gale.* *Arrows fly with the Wind.*

OCTOBER & NOVEMBER — 1876.

Chart Plate 17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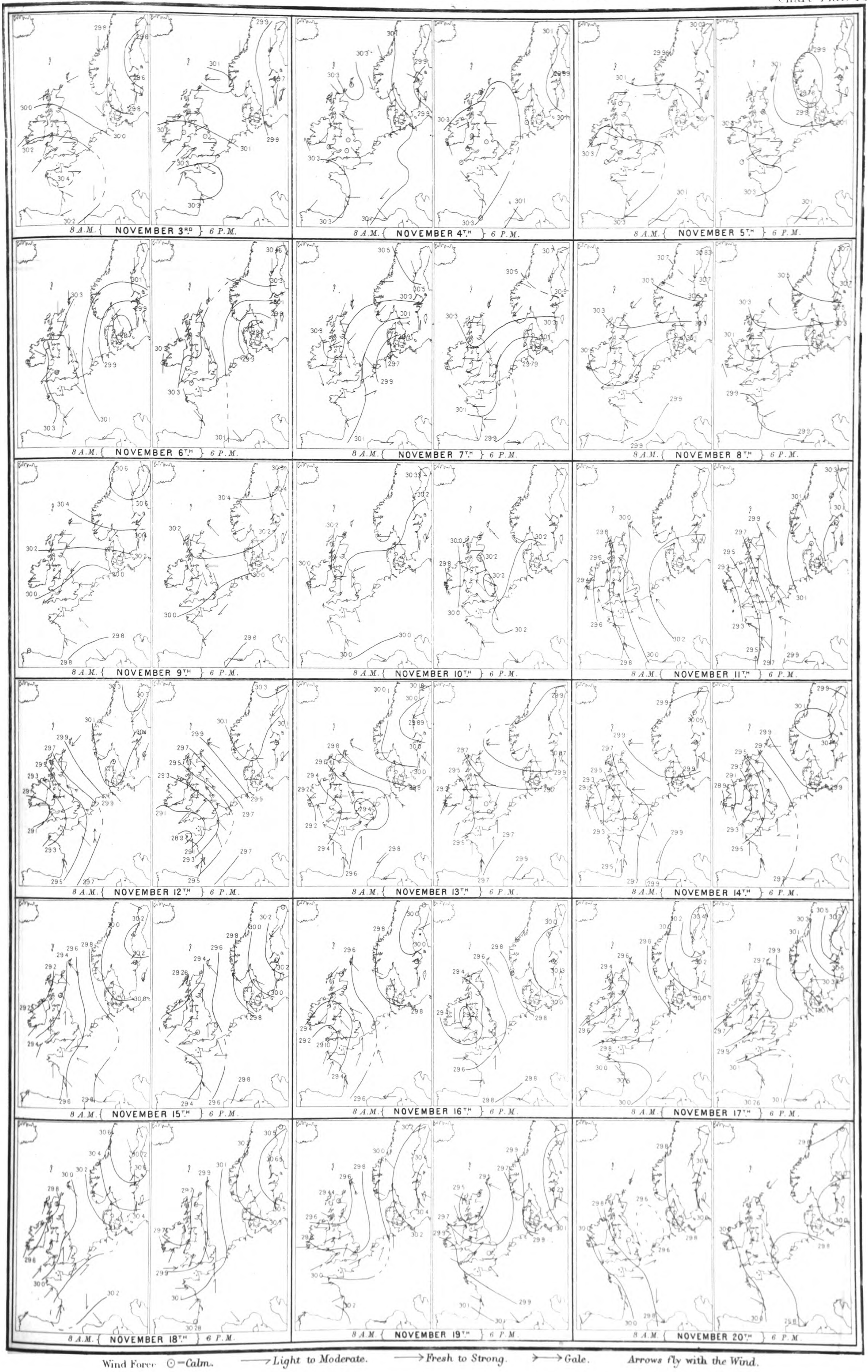
8 A.M. { OCTOBER 17TH } 6 P.M.
8 A.M. { OCTOBER 18TH } 6 P.M.
8 A.M. { OCTOBER 19TH } 6 P.M.
8 A.M. { OCTOBER 20TH } 6 P.M.
8 A.M. { OCTOBER 21ST } 6 P.M.
8 A.M. { OCTOBER 22ND } 6 P.M.
8 A.M. { OCTOBER 23RD } 6 P.M.
8 A.M. { OCTOBER 24TH } 6 P.M.
8 A.M. { OCTOBER 25TH } 6 P.M.
8 A.M. { OCTOBER 26TH } 6 P.M.
8 A.M. { OCTOBER 27TH } 6 P.M.
8 A.M. { OCTOBER 28TH } 6 P.M.
8 A.M. { OCTOBER 29TH } 6 P.M.
8 A.M. { OCTOBER 30TH } 6 P.M.
8 A.M. { OCTOBER 31ST } 6 P.M.
8 A.M. { NOVEMBER 1ST } 6 P.M.
8 A.M. { NOVEMBER 2ND } 6 P.M.

Wind Force _ ⊙ = *Calm.* ⟶ *Light to Moderate.* ⟶ *Fresh to Strong.* ⟶ *Gale.* *Arrows fly with the Wind.*

NOVEMBER ——— 1876.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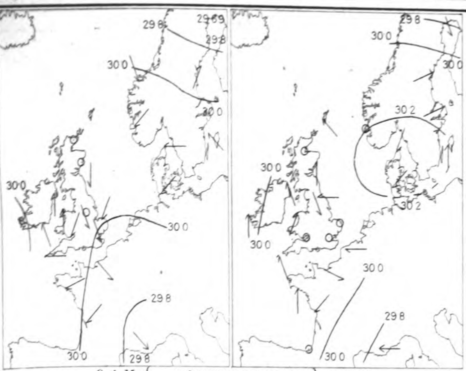
8 A.M. { NOVEMBER 4TH } 6 P.M.
8 A.M. { NOVEMBER 5TH } 6 P.M.
8 A.M. { NOVEMBER 6TH } 6 P.M.
8 A.M. { NOVEMBER 7TH } 6 P.M.
8 A.M. { NOVEMBER 8TH } 6 P.M.
8 A.M. { NOVEMBER 9TH } 6 P.M.
8 A.M. { NOVEMBER 10TH } 6 P.M.
8 A.M. { NOVEMBER 11TH } 6 P.M.
8 A.M. { NOVEMBER 12TH } 6 P.M.
8 A.M. { NOVEMBER 13TH } 6 P.M.
8 A.M. { NOVEMBER 14TH } 6 P.M.
8 A.M. { NOVEMBER 15TH } 6 P.M.
8 A.M. { NOVEMBER 16TH } 6 P.M.
8 A.M. { NOVEMBER 17TH } 6 P.M.
8 A.M. { NOVEMBER 18TH } 6 P.M.
8 A.M. { NOVEMBER 19TH } 6 P.M.
8 A.M. { NOVEMBER 20TH } 6 P.M.

Wind Force ⊙ = *Calm.* ⟶ *Light to Moderate.* ⟶ *Fresh to Strong.* ⟶ *Gale.* *Arrows fly with the Wind.*

NOVEMBER & DECEMBER ——— 1876.

Chart Plate 19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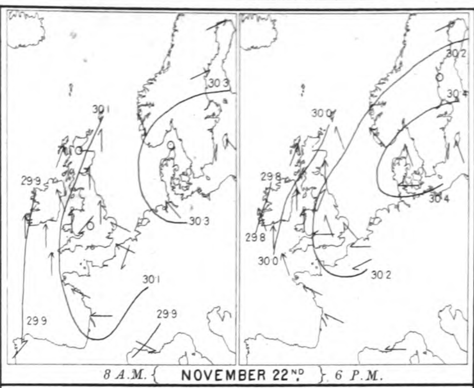
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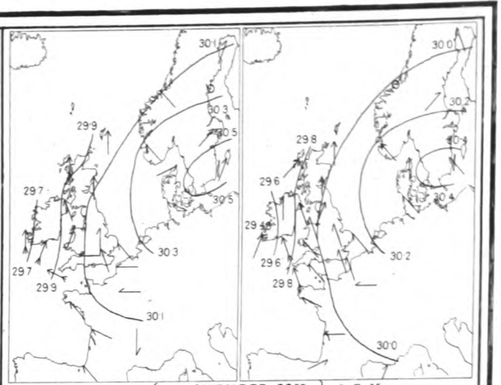
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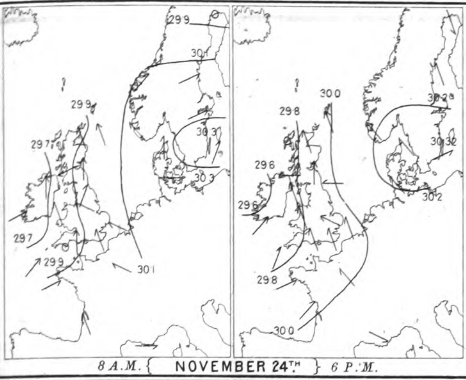
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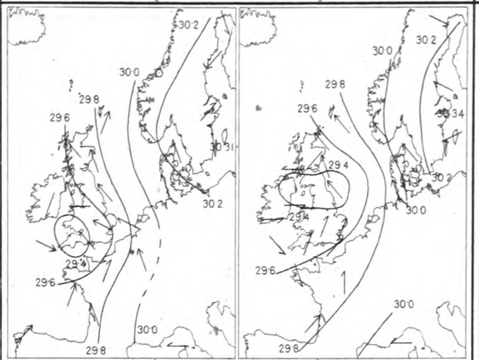
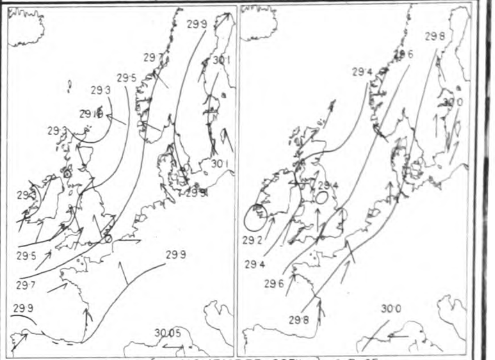

8 A.M. { NOVEMBER 25TH } 6 P.M.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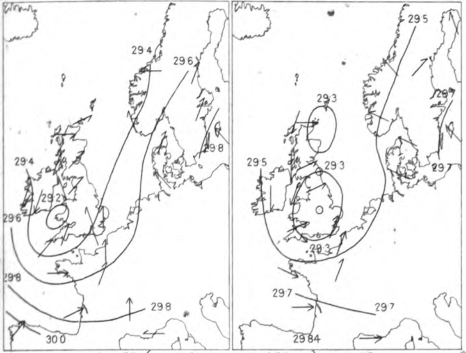
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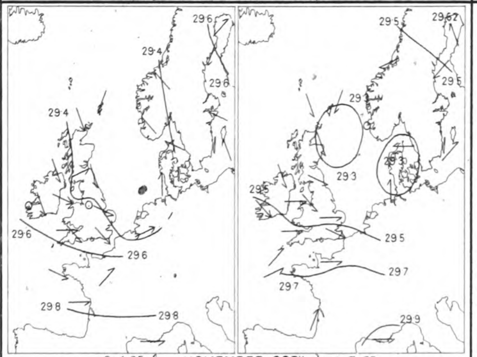
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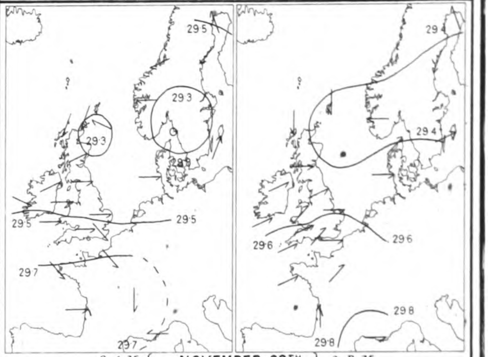
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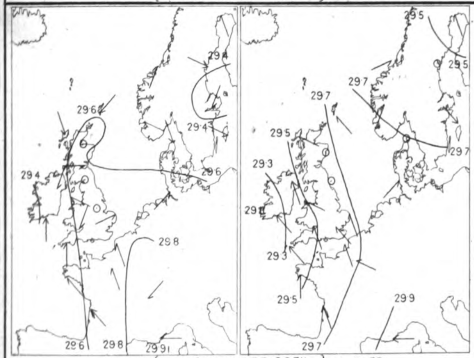
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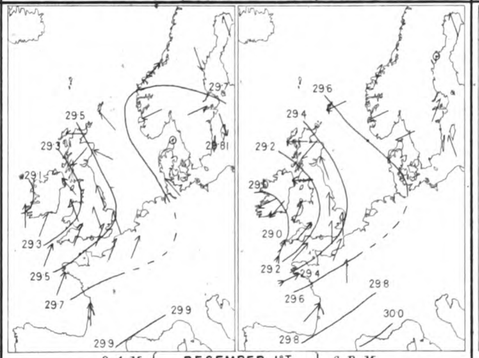
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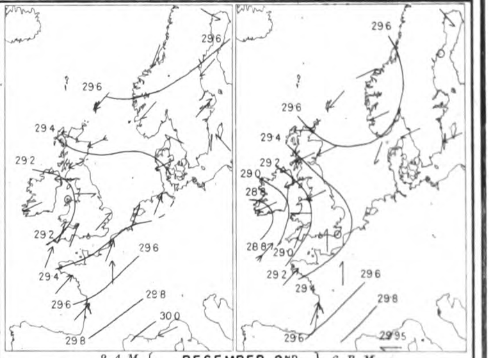
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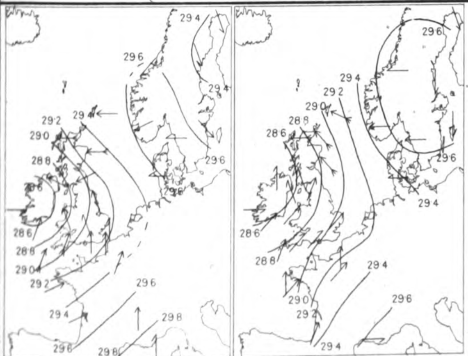
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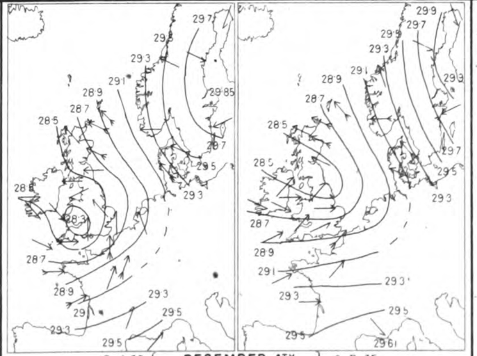
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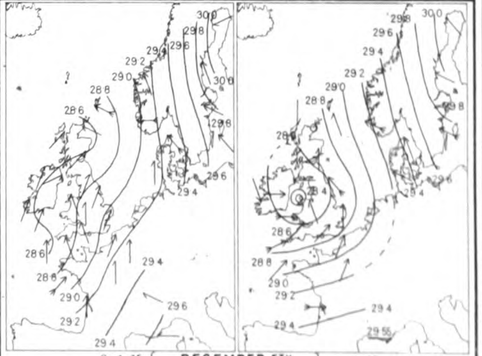
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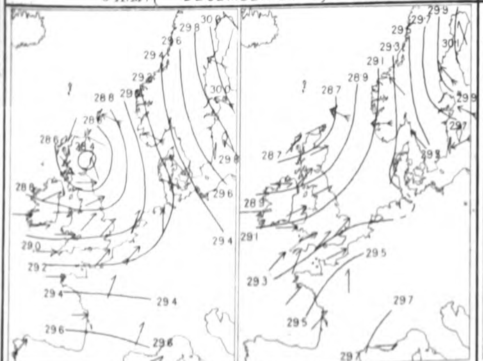
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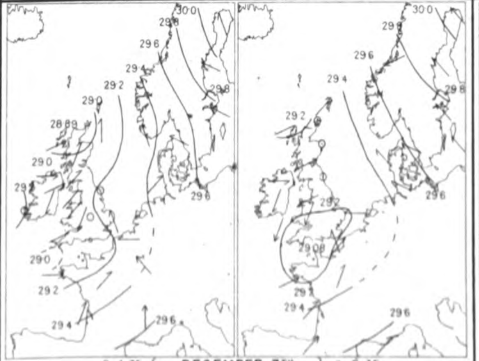
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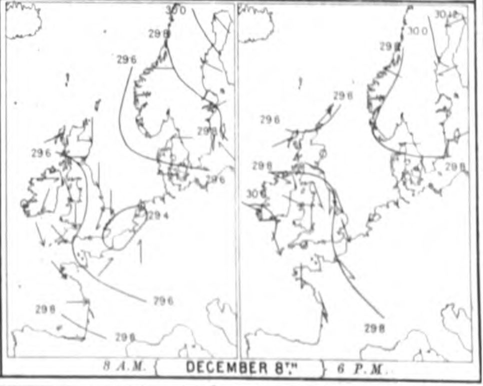
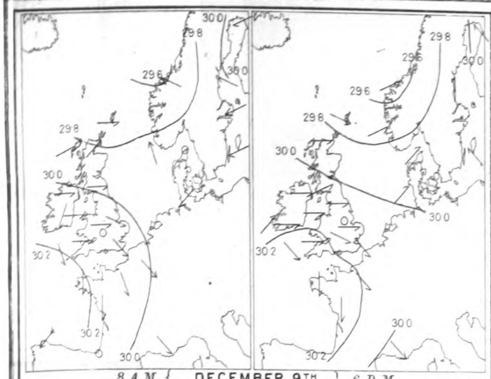

8 A.M. { DECEMBER 8TH } 6 P.M.

Wind Force _ ⊙ — *Calm.* → *Light to Moderate.* → *Fresh to Strong.* → *Gale.* *Arrows fly with the Wind.*

DECEMBER — 1876.

Chart Plate 20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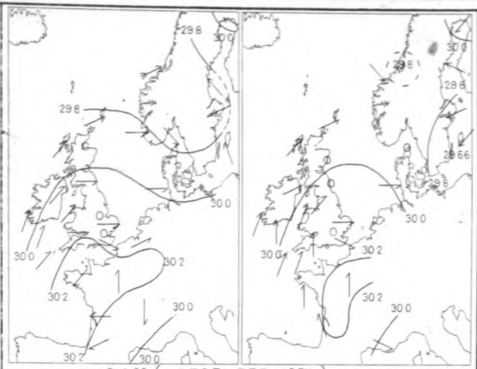
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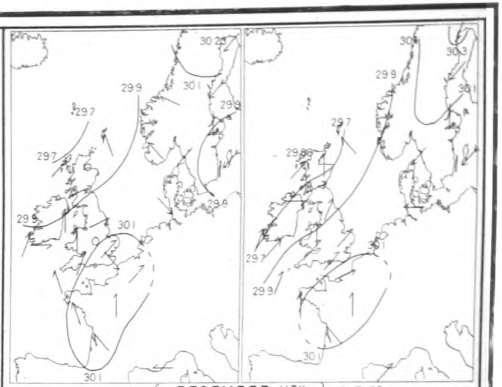
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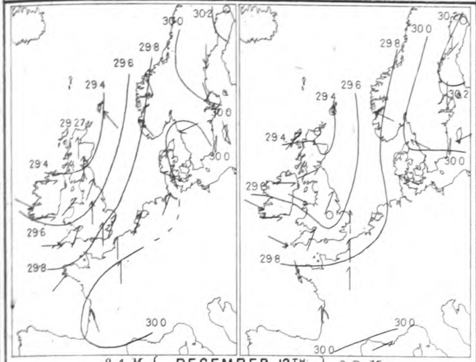
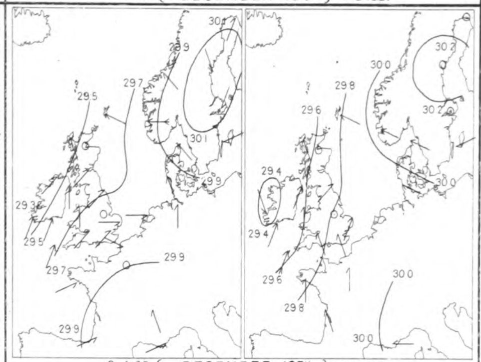

8 A.M. { DECEMBER 12TH } 6 P.M.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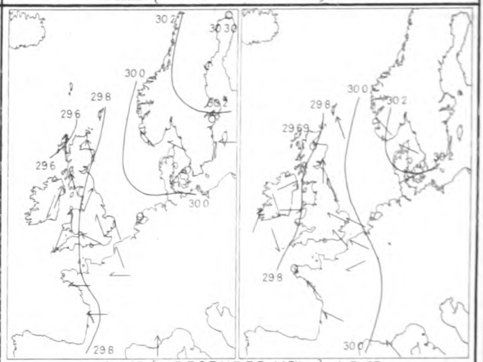
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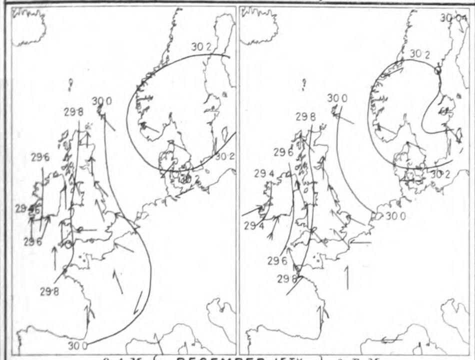
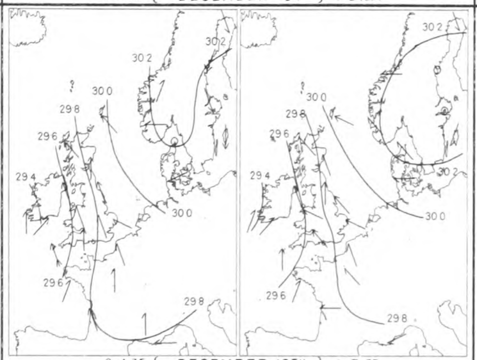

8 A.M. { DECEMBER 15TH } 6 P.M.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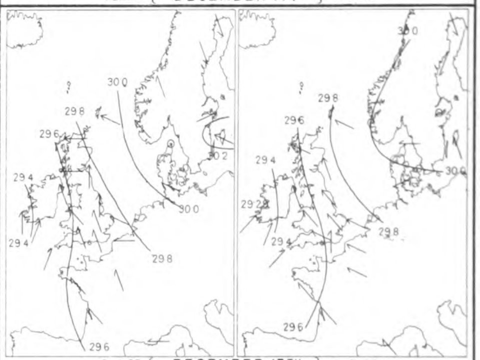
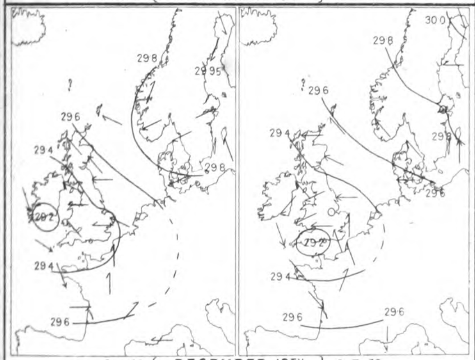

8 A.M. { DECEMBER 17TH } 6 P.M.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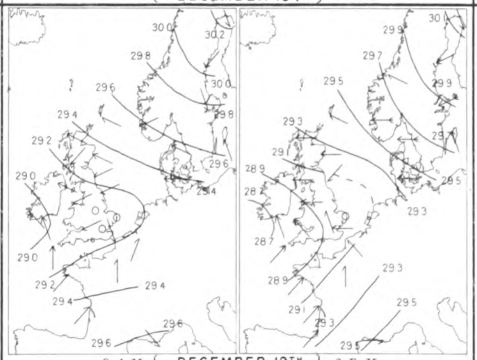
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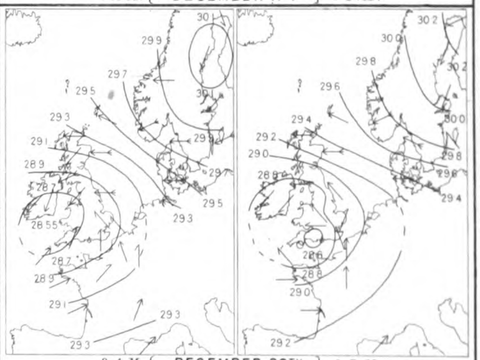
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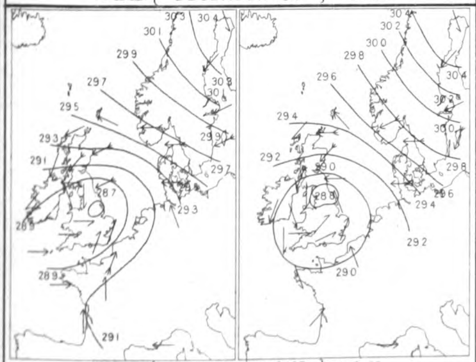
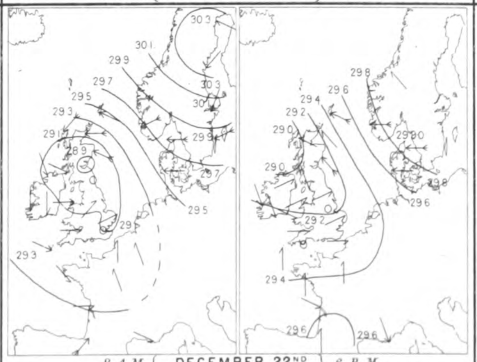
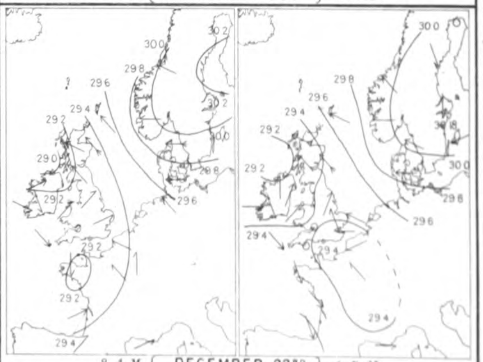

8 A.M. { DECEMBER 21ST } 6 P.M.


8 A.M. { DECEMBER 22ND } 6 P.M.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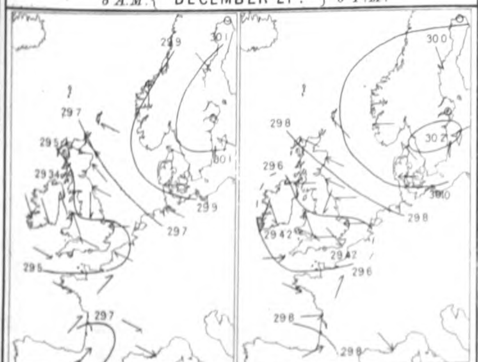
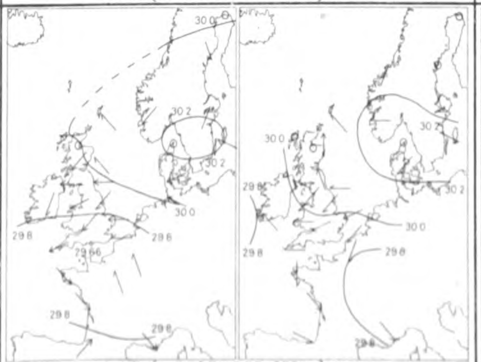
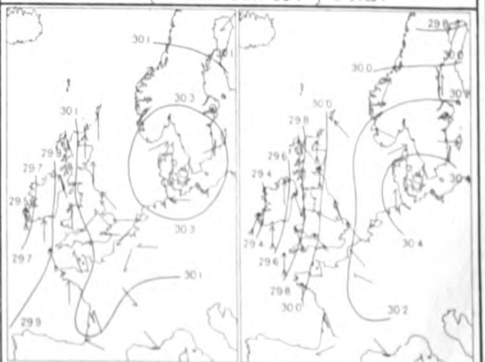

8 A.M. { DECEMBER 24TH } 6 P.M.

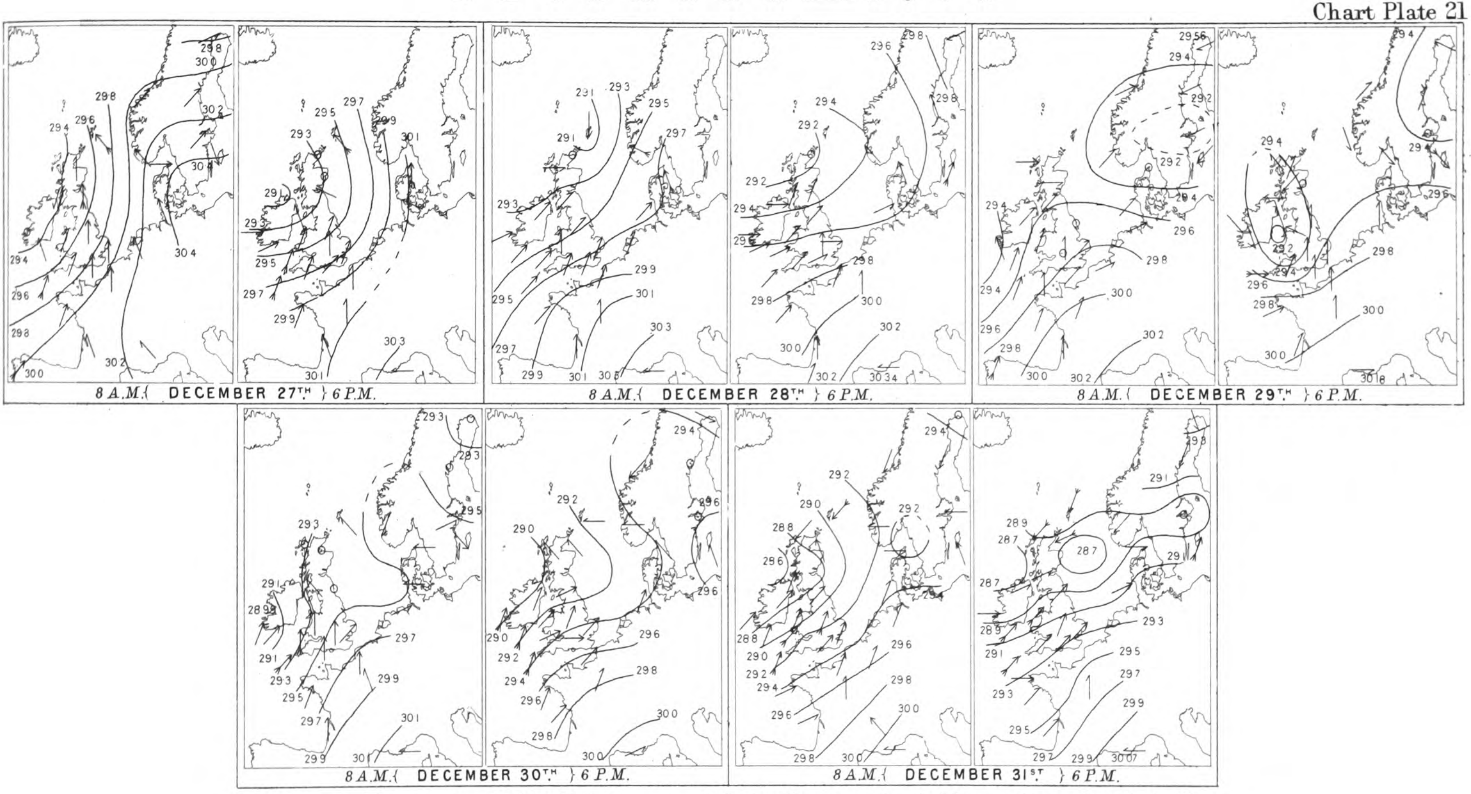

8 A.M. { DECEMBER 25TH } 6 P.M.


8 A.M. { DECEMBER 26TH } 6 P.M.

Wind Force ⊙ – *Calm.* → *Light to Moderate.* → *Fresh to Strong.* → *Gale.* *Arrows fly with the Wind.*

DECEMBER — 1876.

Chart Plate 21

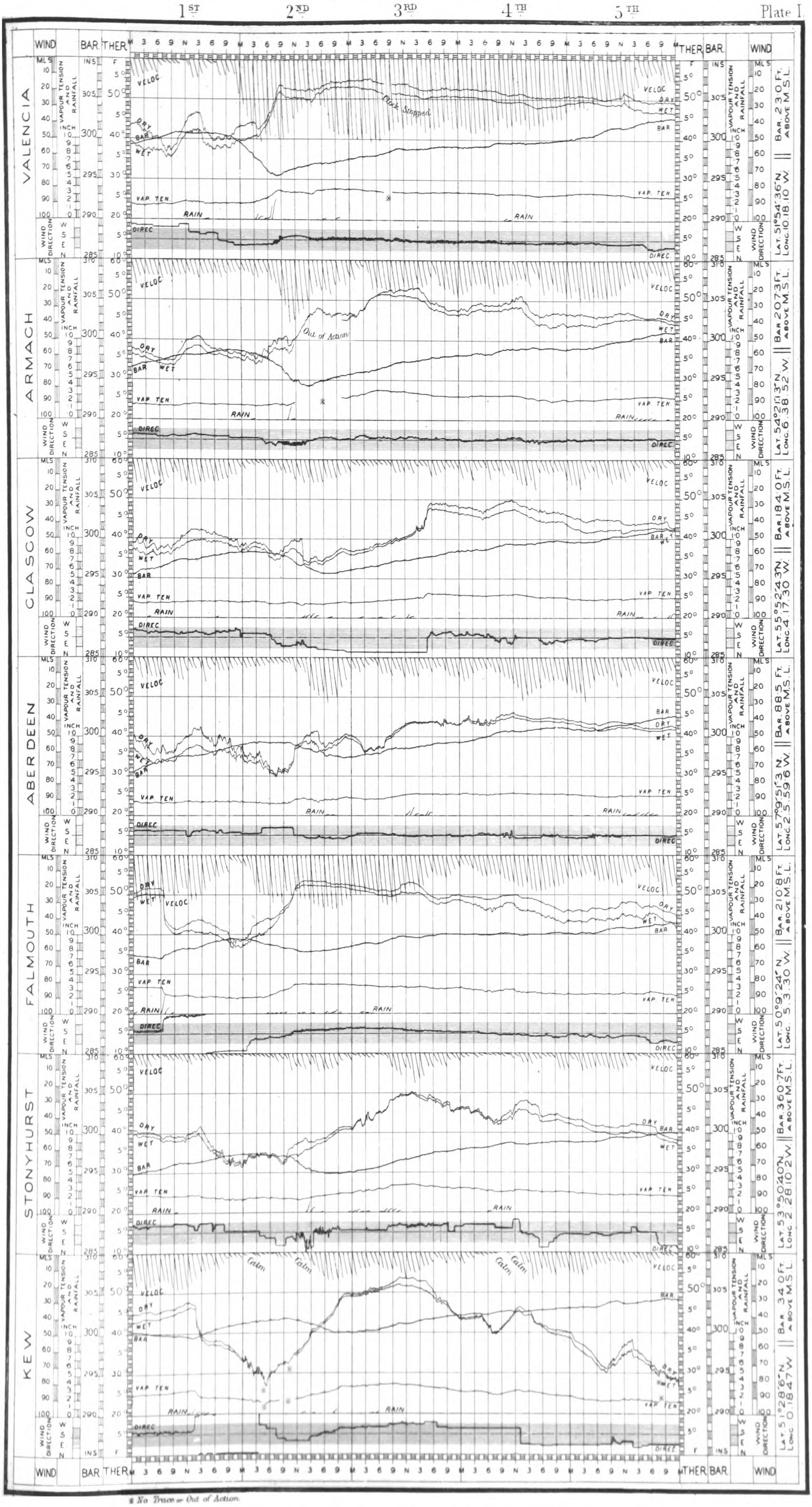


8 A.M.{ DECEMBER 27TH }6 P.M.
8 A.M.{ DECEMBER 28TH }6 P.M.
8 A.M.{ DECEMBER 29TH }6 P.M.
8 A.M.{ DECEMBER 30TH }6 P.M.
8 A.M.{ DECEMBER 31ST }6 P.M.

Wind Force _ : ⊙ = *Calm.* → *Light to Moderate.* → *Fresh to Strong.* → *Gale.* *Arrows fly with the Wind.*

JANUARY — 1876.

Plate I.

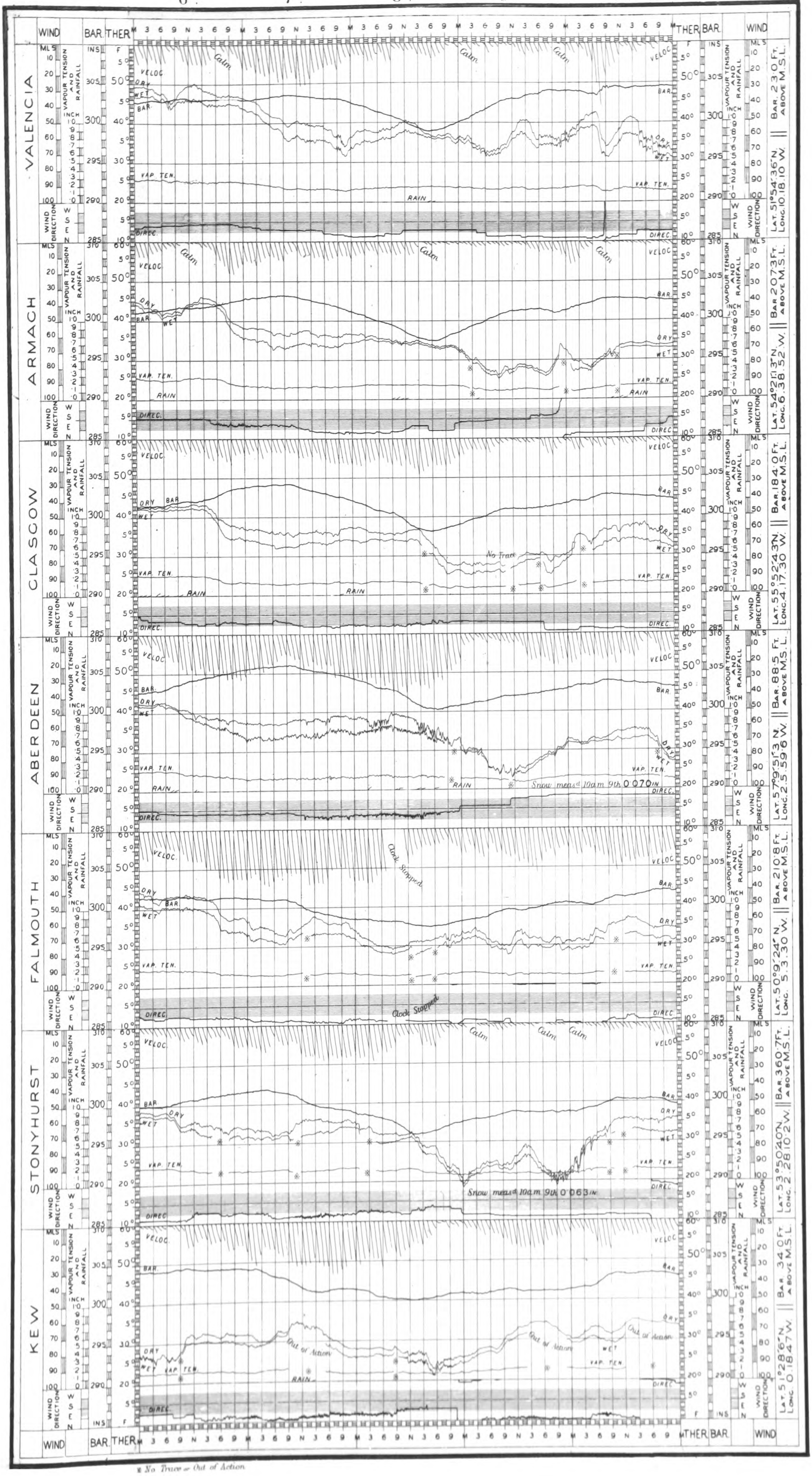


* No Trace = Out of Action

JANUARY 1876.

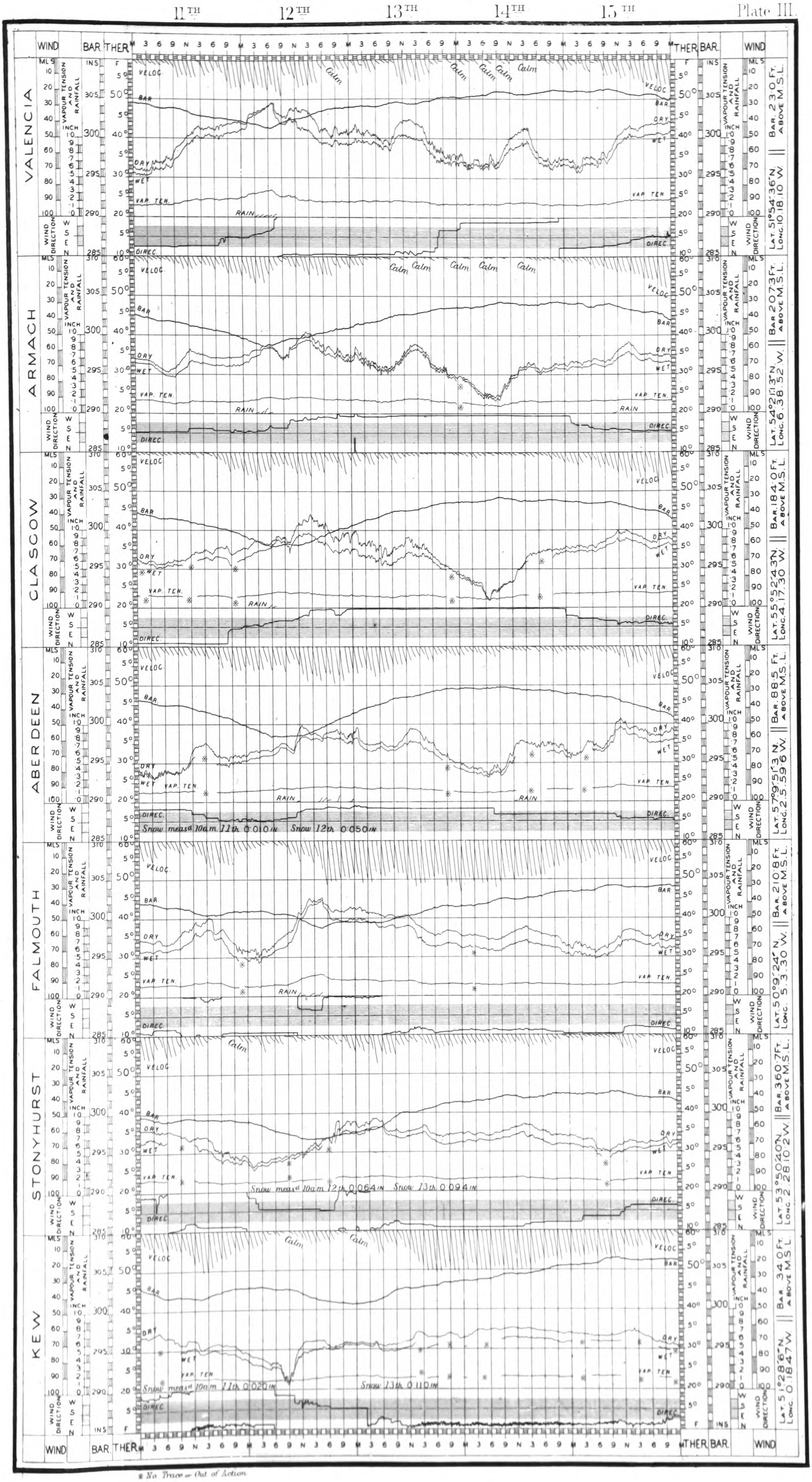
Plate II.

6th 7th 8th 9th 10th



* No Trace — Out of Action

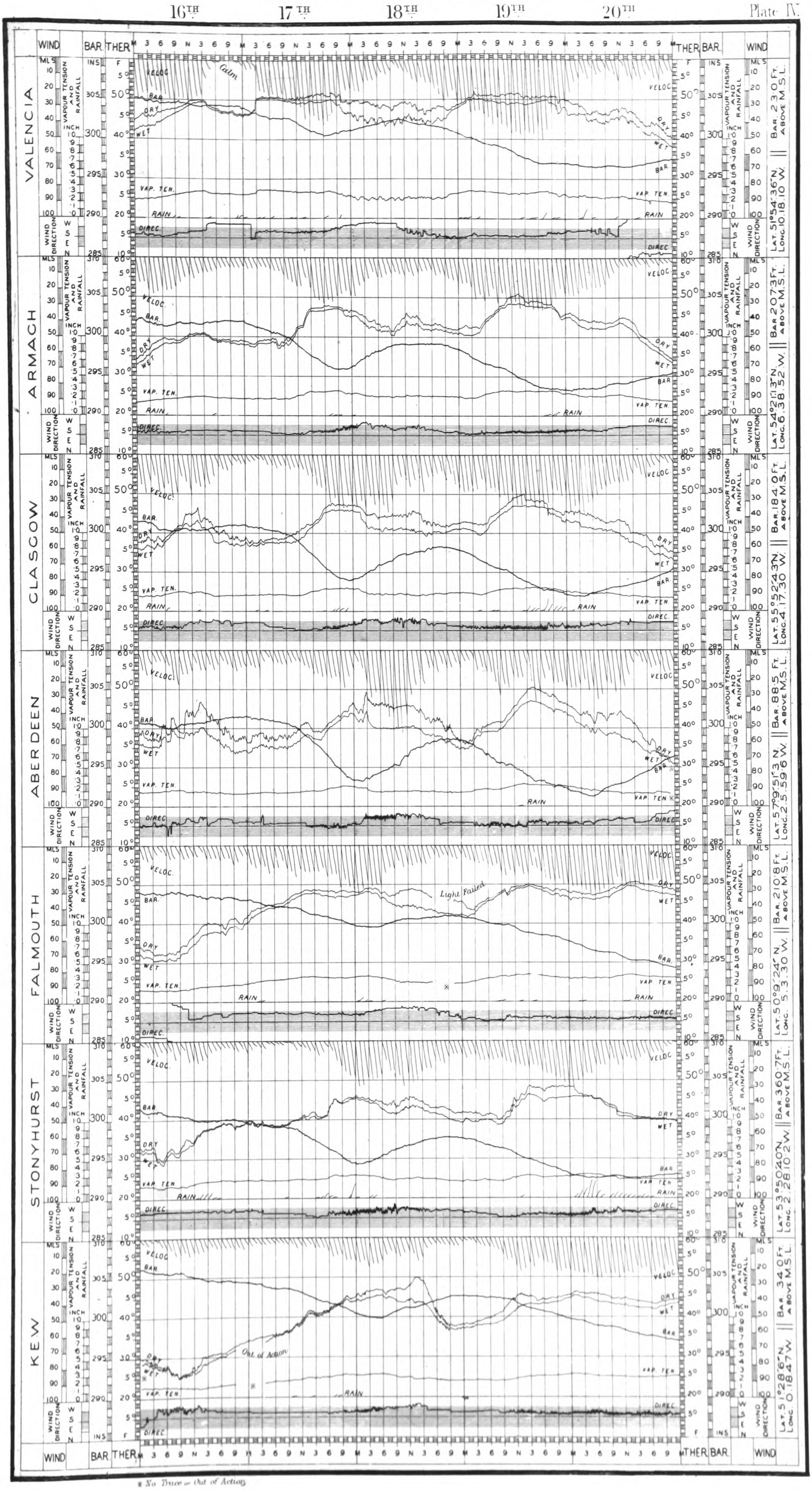
JANUARY 1876.



* No Trace = Out of Action

JANUARY — 1876.

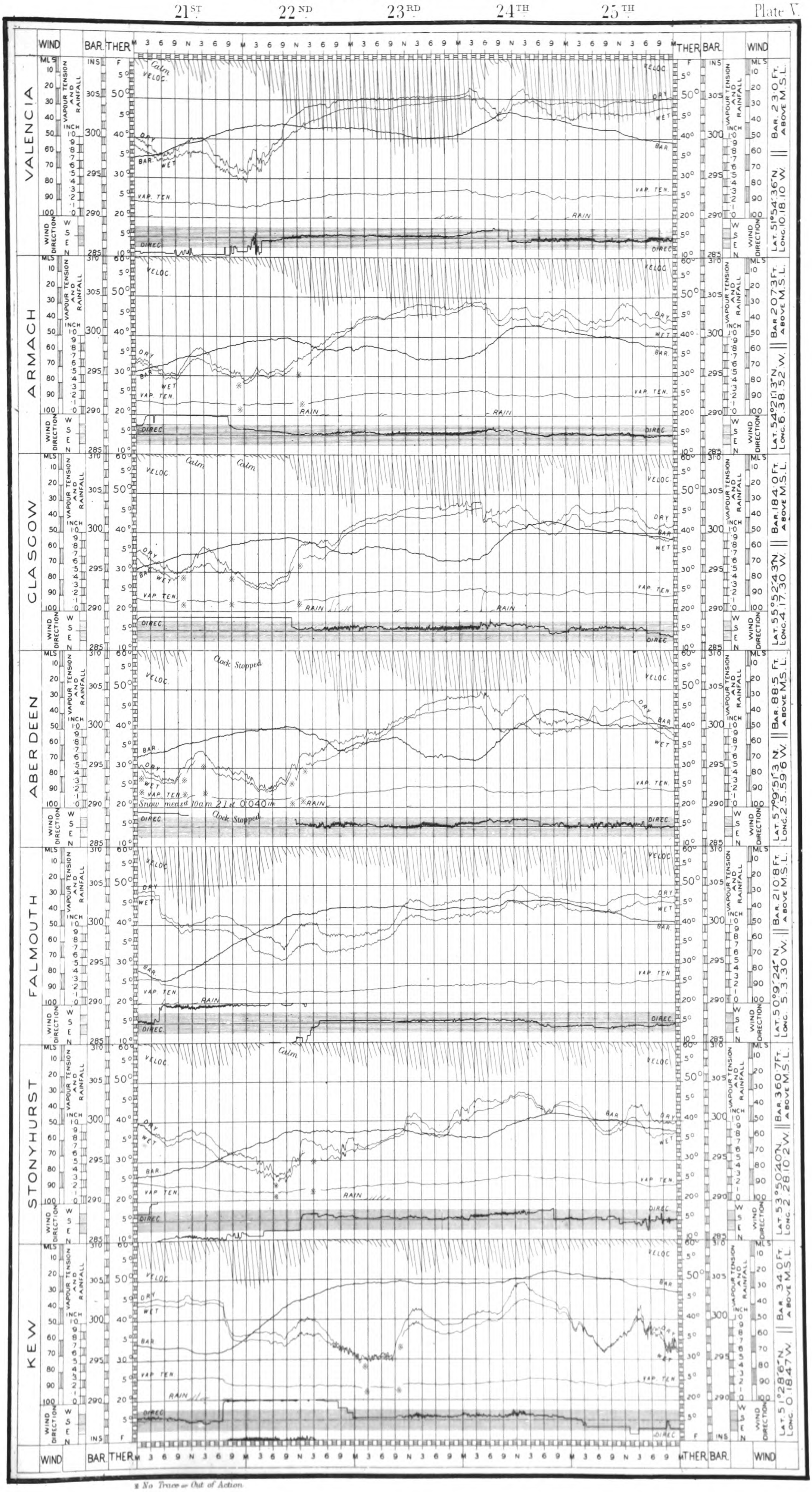
Plate IV.



* No Trace or Out of Action.

JANUARY — 1876.

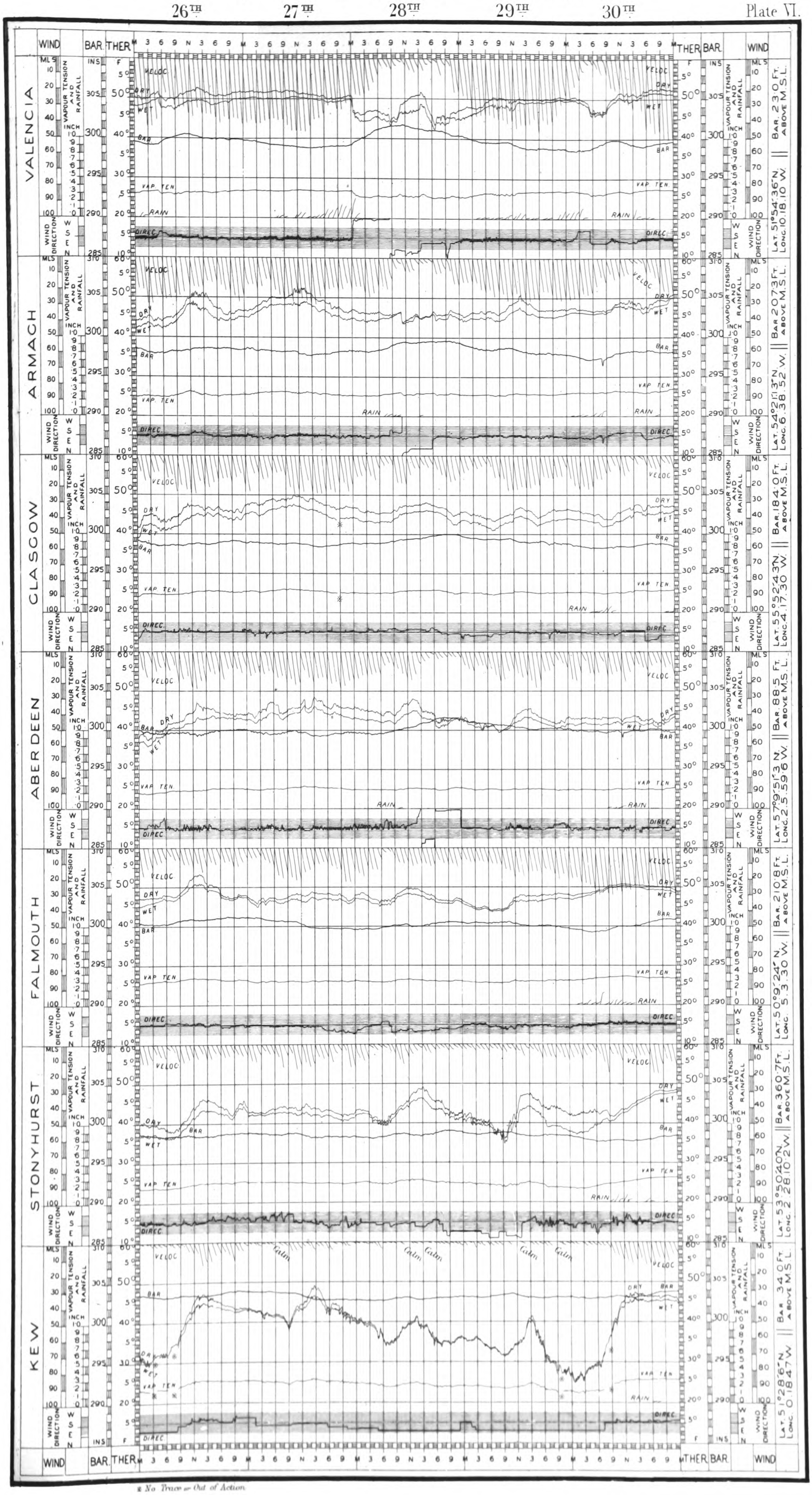
Plate V.



* No Trace = Out of Action.

JANUARY — 1876.

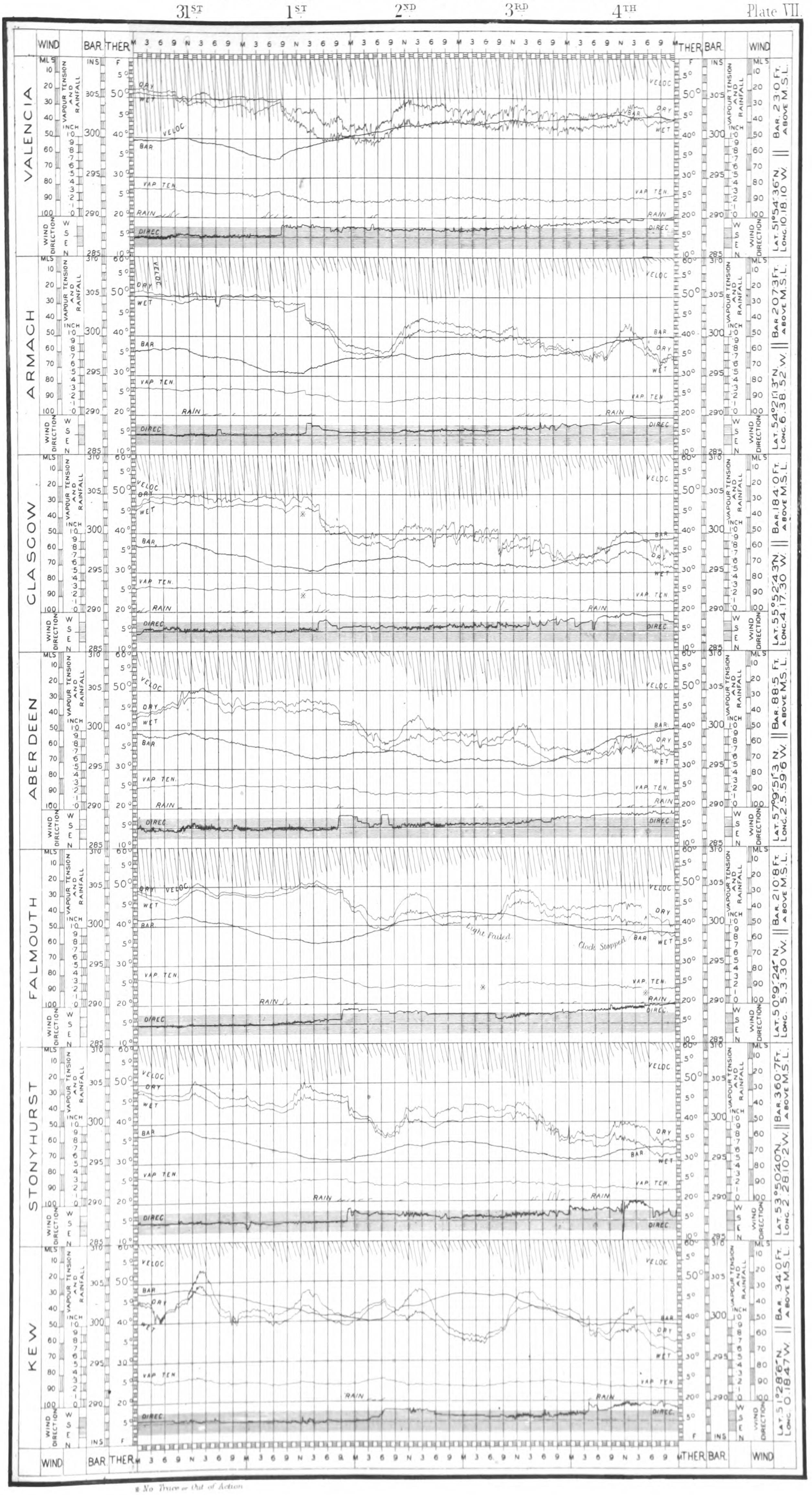
26th 27th 28th 29th 30th Plate VI.



* No Trace = Out of Action

JANUARY & FEBRUARY__1876.

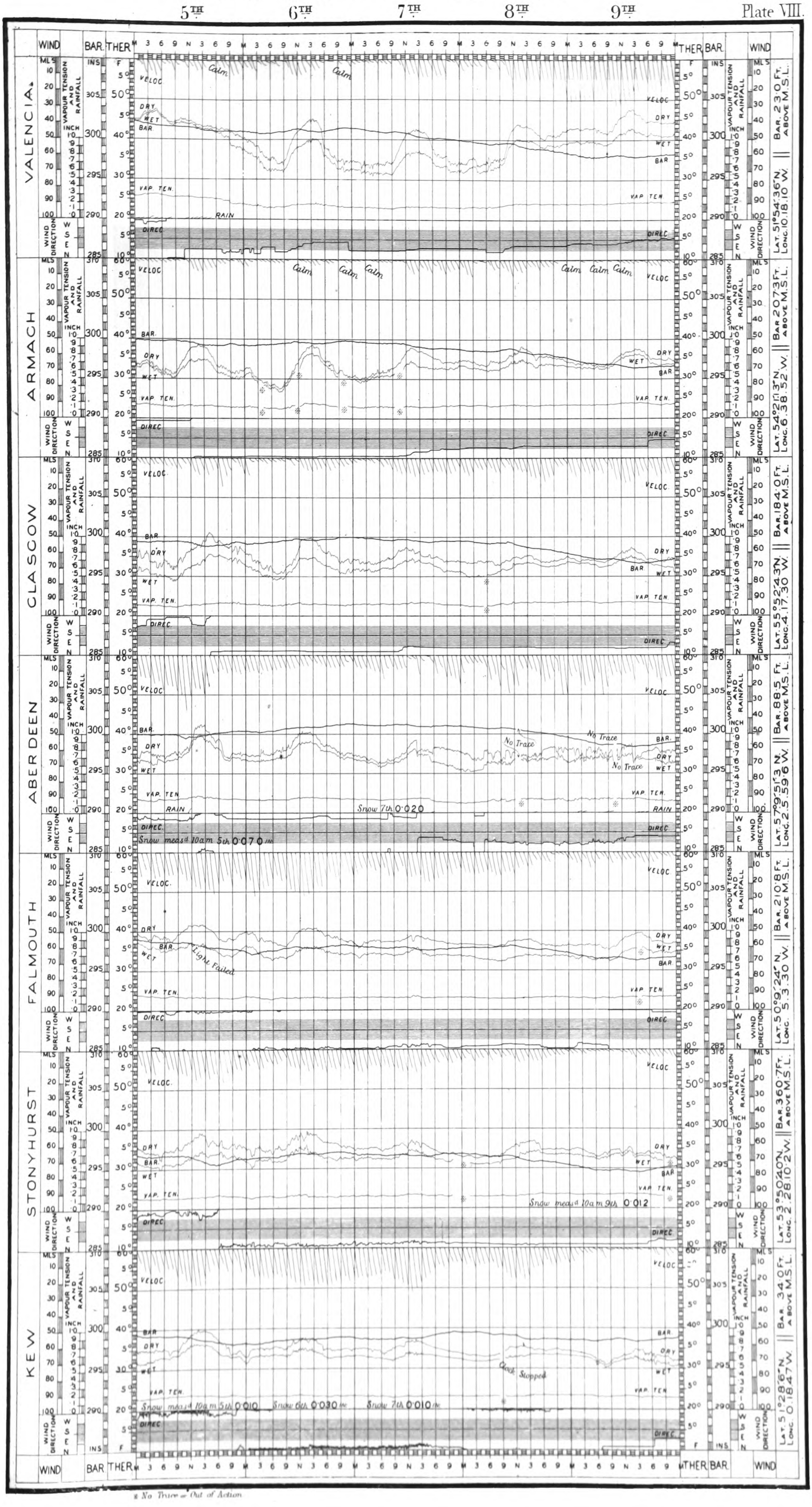
Plate VII.



* No Trace or Out of Action

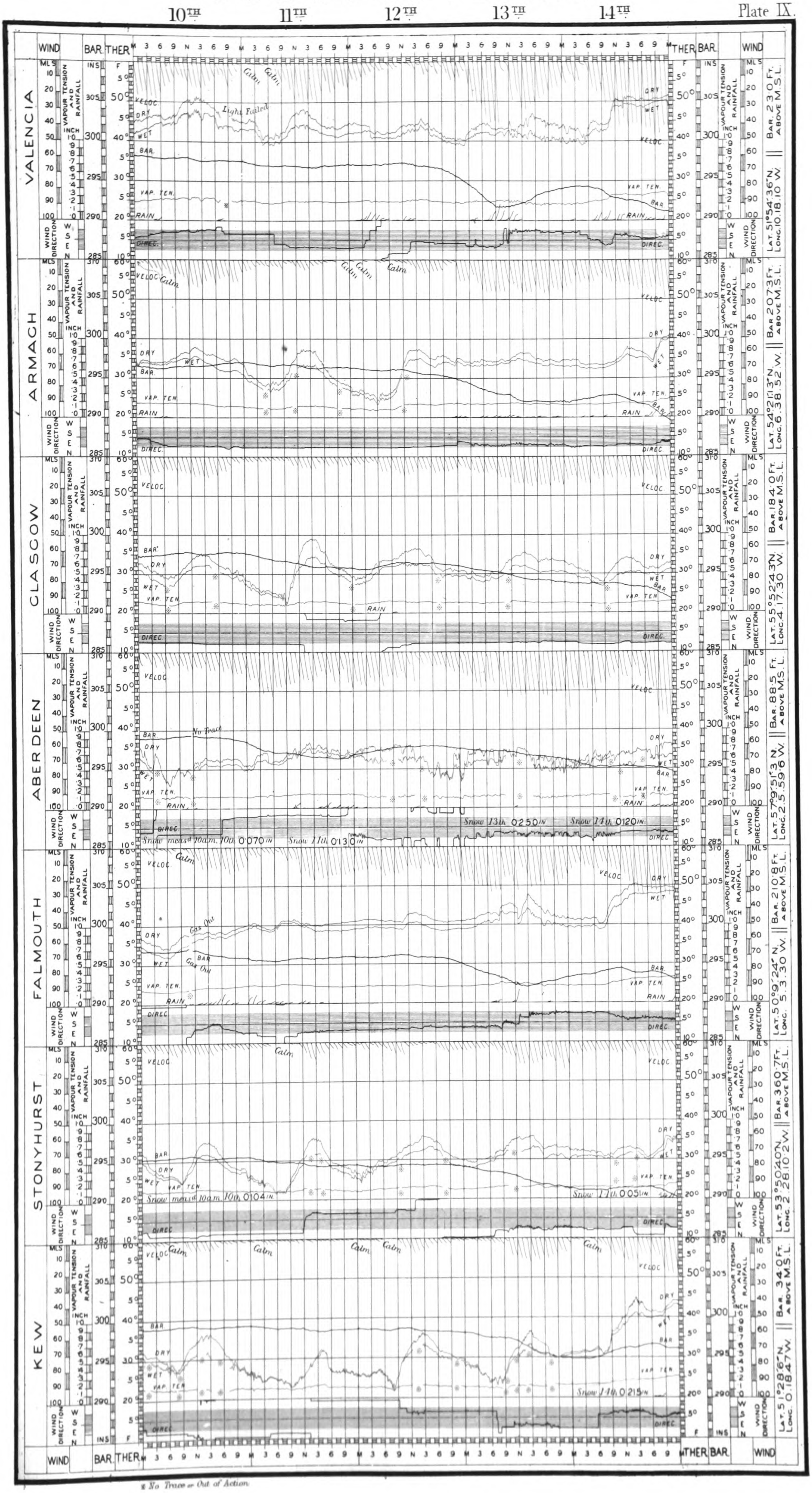
FEBRUARY — 1876.

Plate VIII.



* No Trace = Out of Action

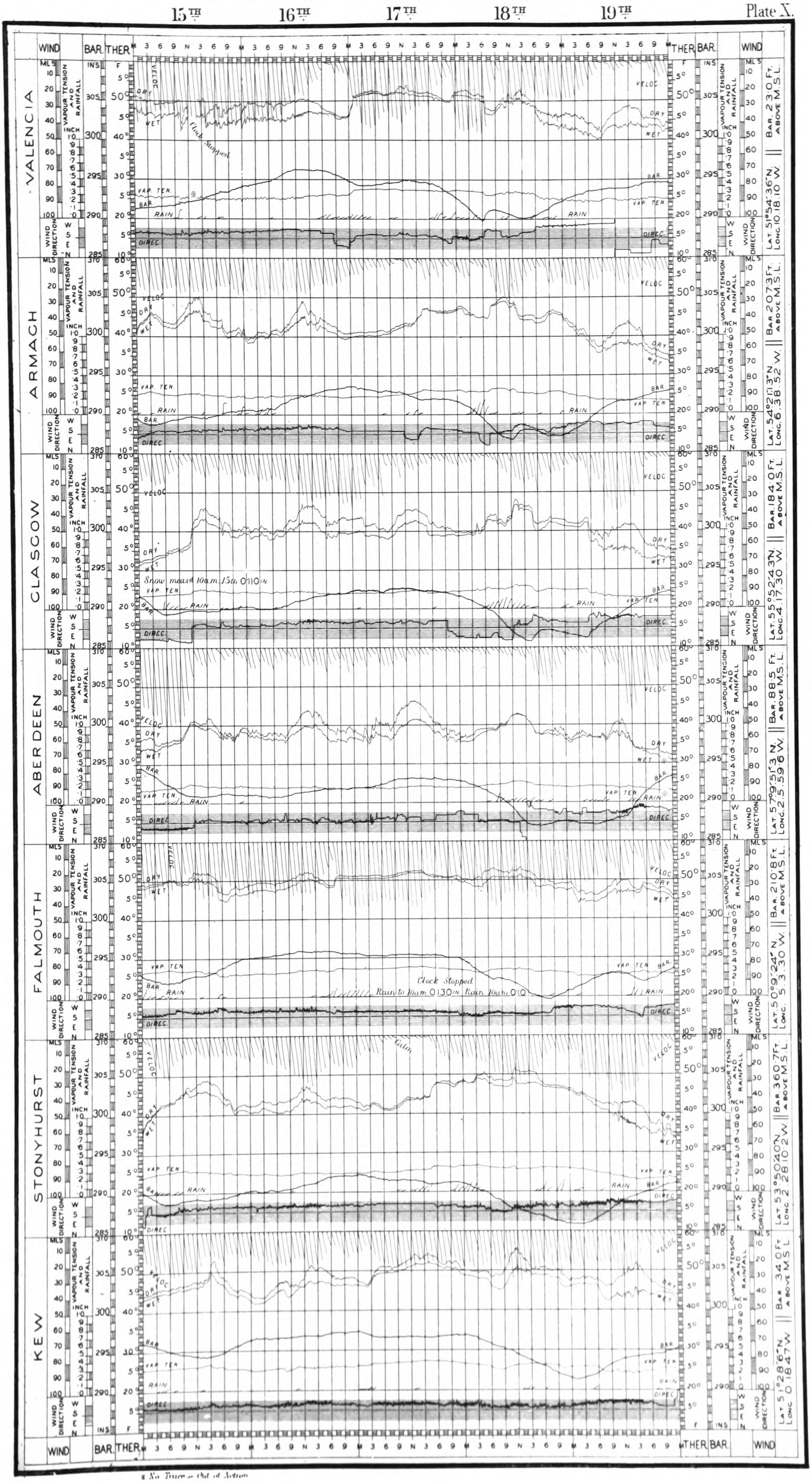
FEBRUARY —— 1876.



* No Trace or Out of Action

FEBRUARY 1876.

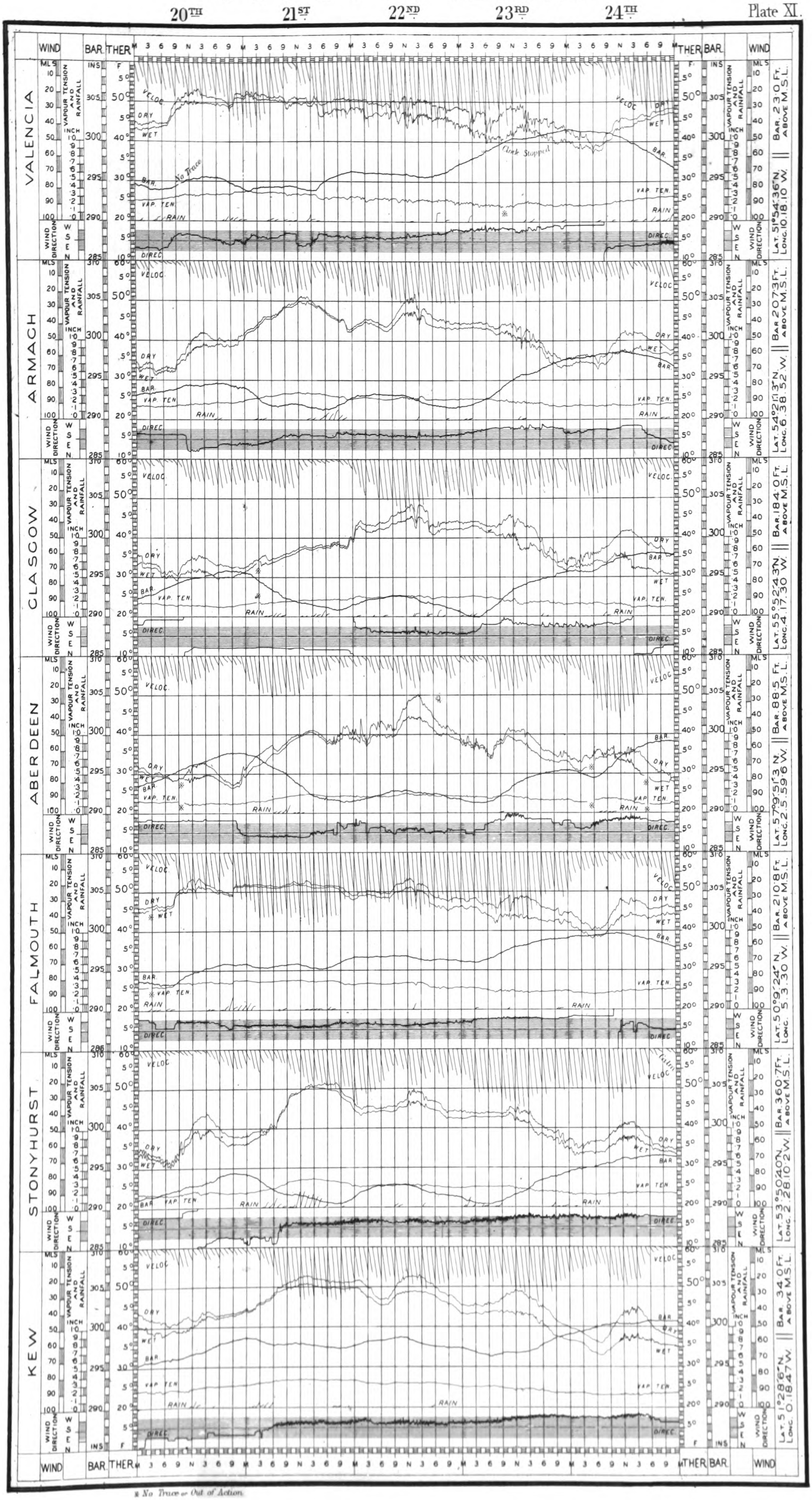
Plate X.



* No Trace or Out of Action

FEBRUARY — 1876.

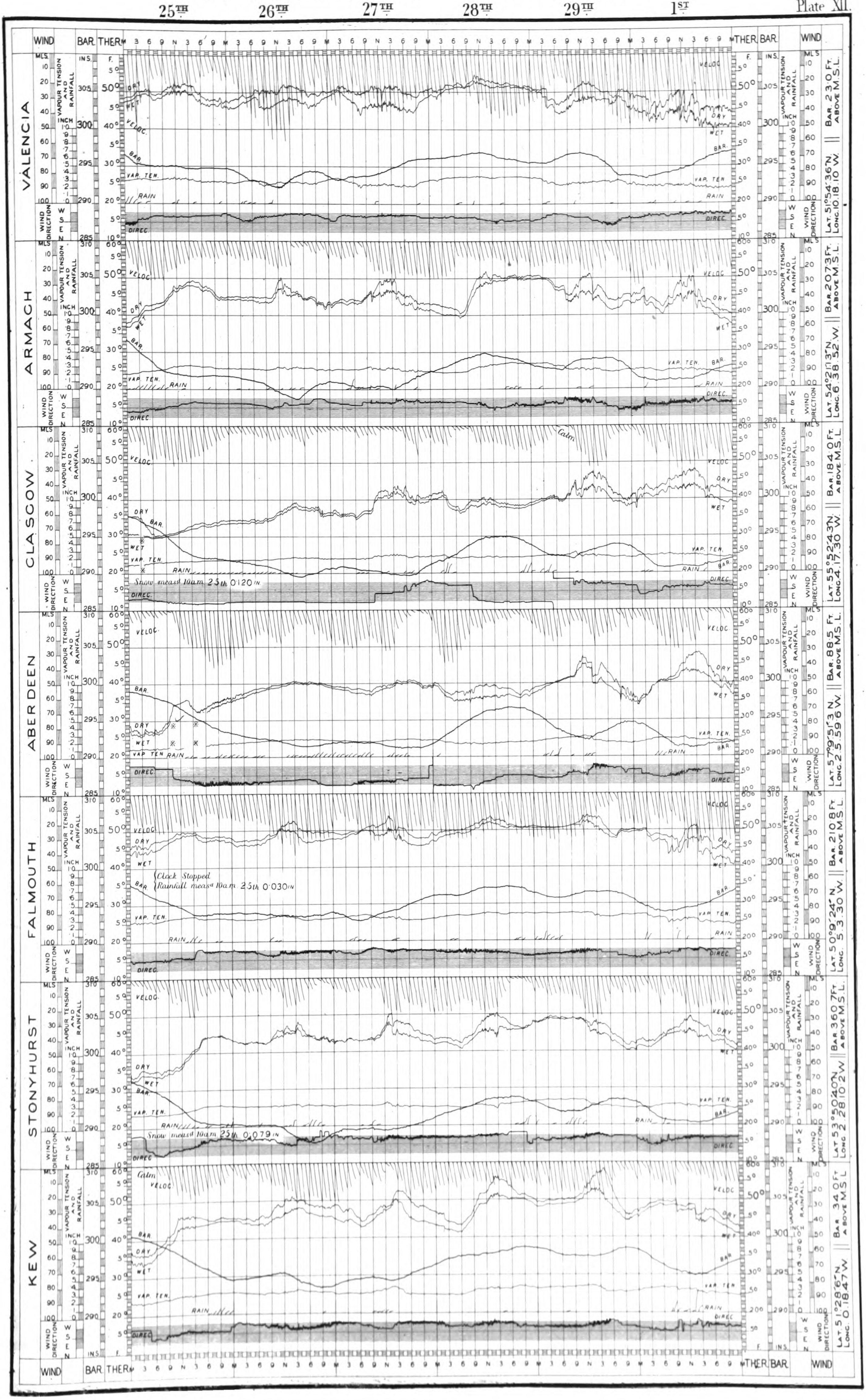
Plate XI.



* No Trace or Out of Action.

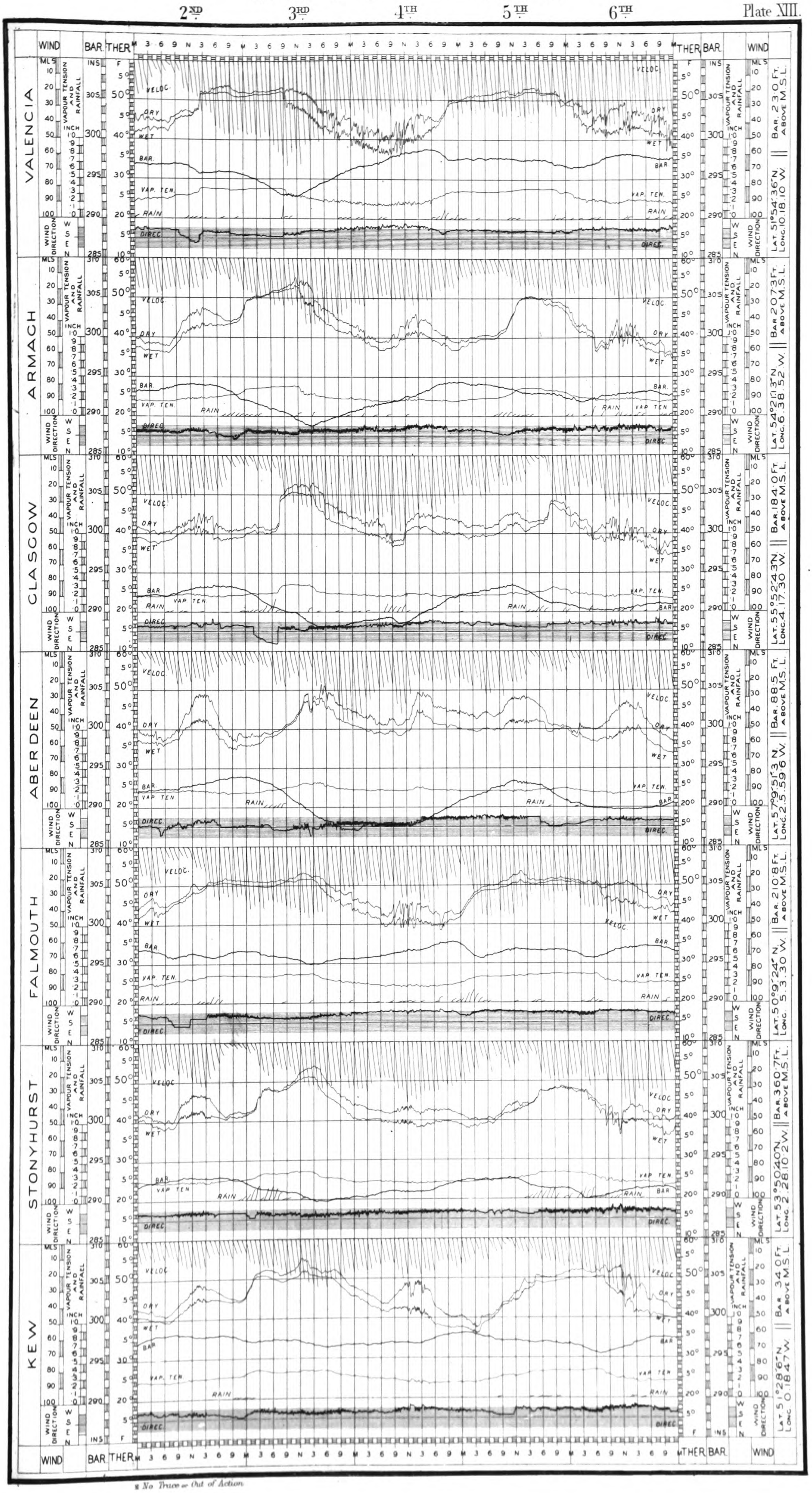
Plate XII.

FEBRUARY & MARCH — 1876.



MARCH — 1876.

Plate XIII.

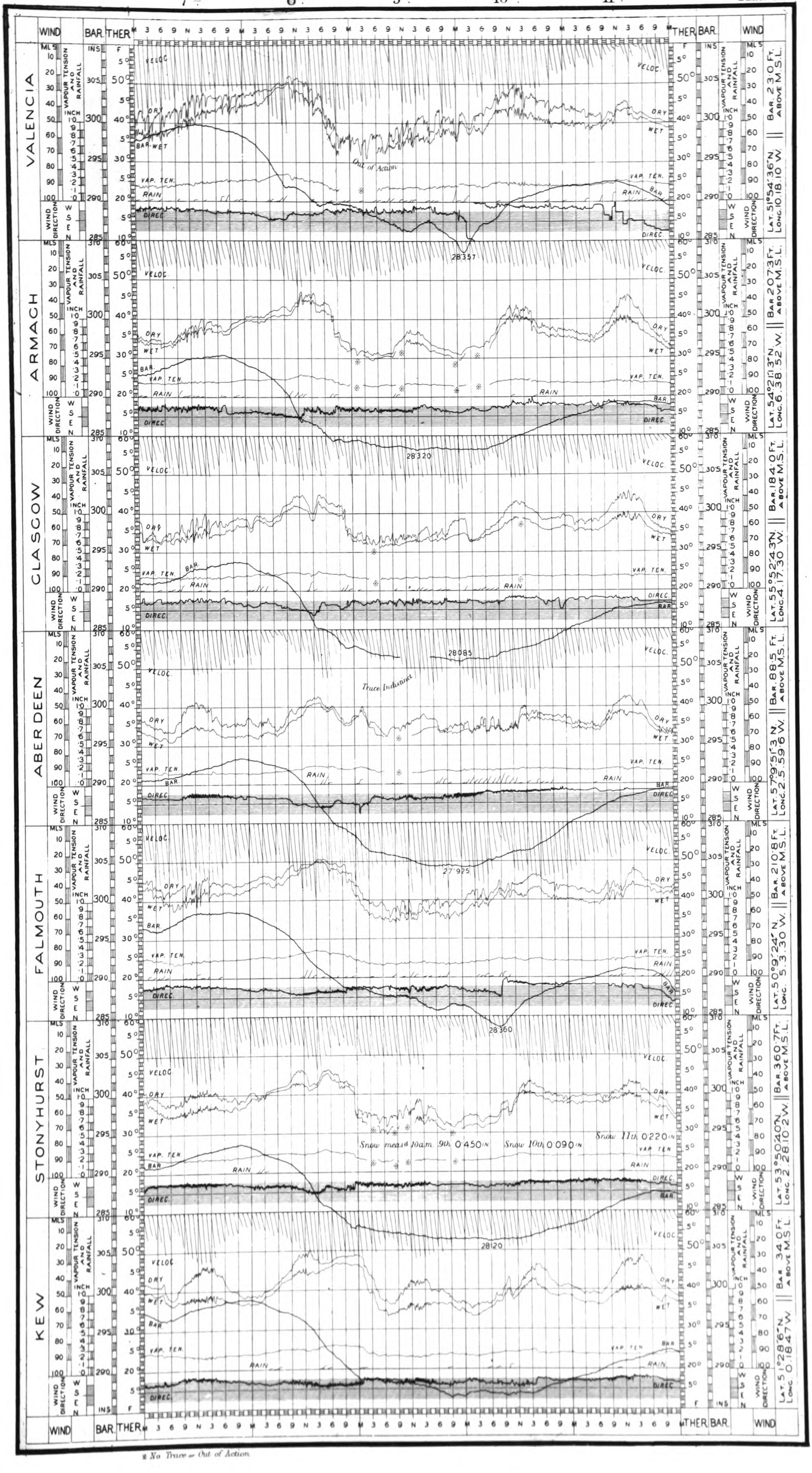


* No Trace or Out of Action

MARCH — 1876.

Plate XIV.

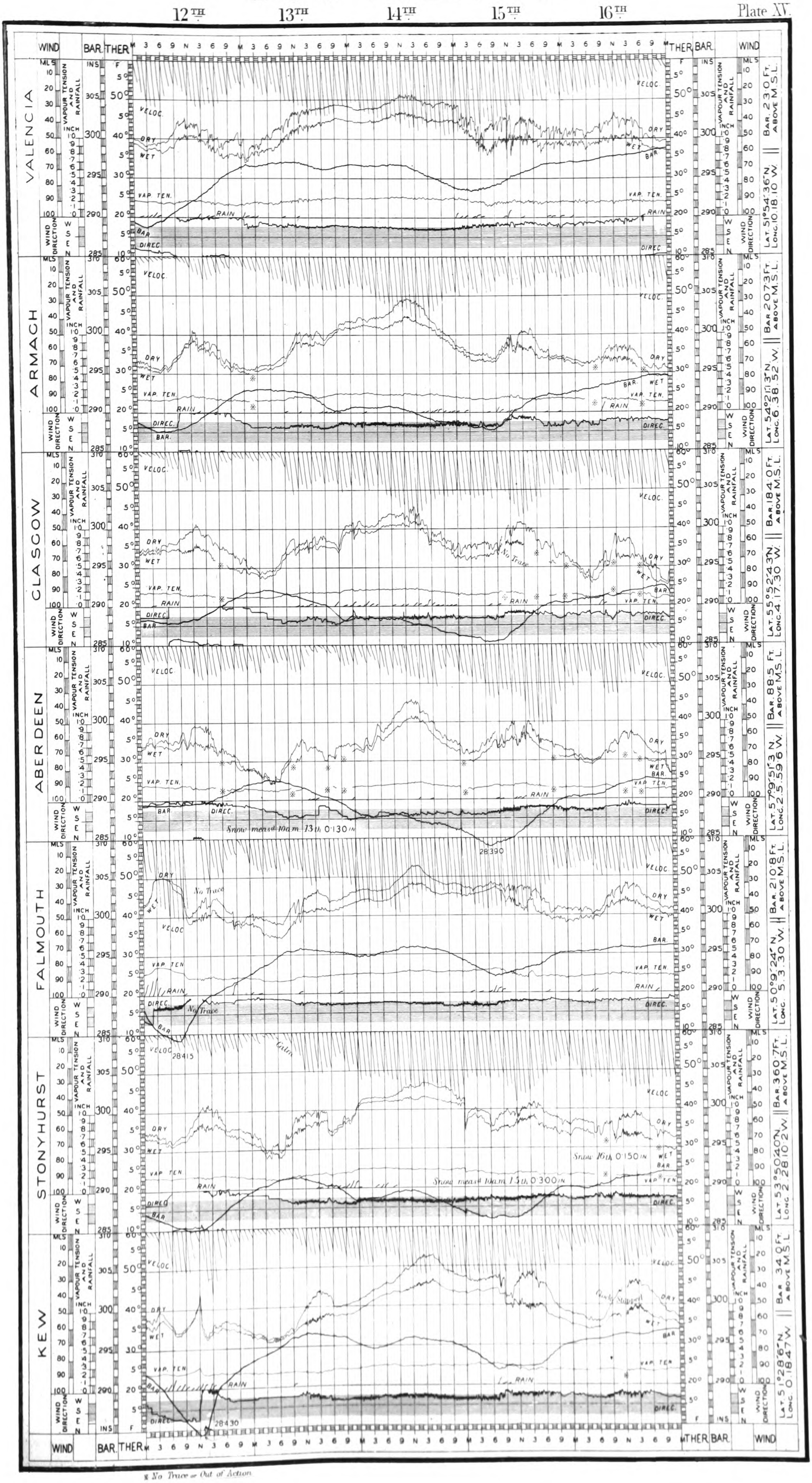
7th 8th 9th 10th 11th



* No Trace or Out of Action

MARCH — 1876.

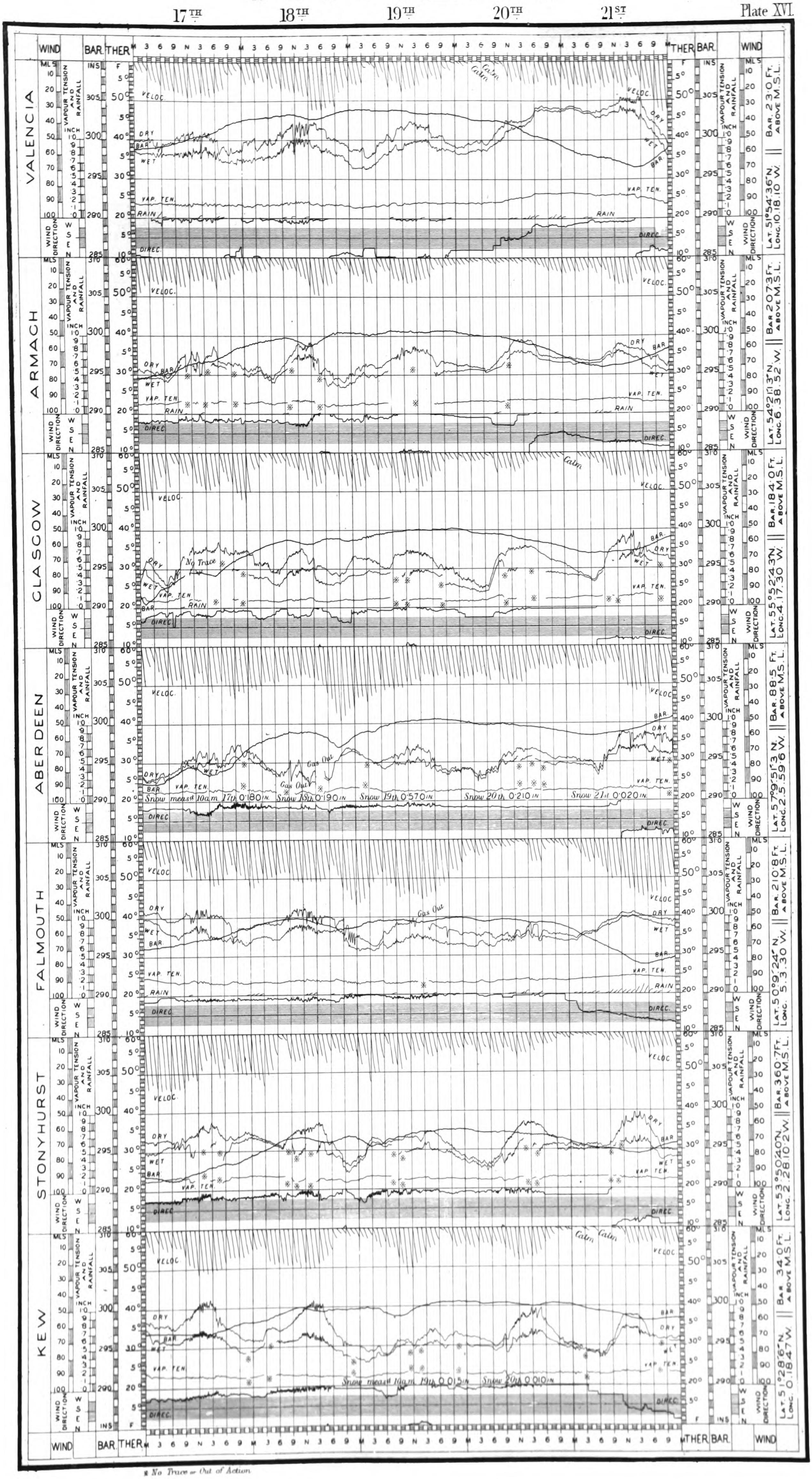
Plate XV.



* No Trace or Out of Action

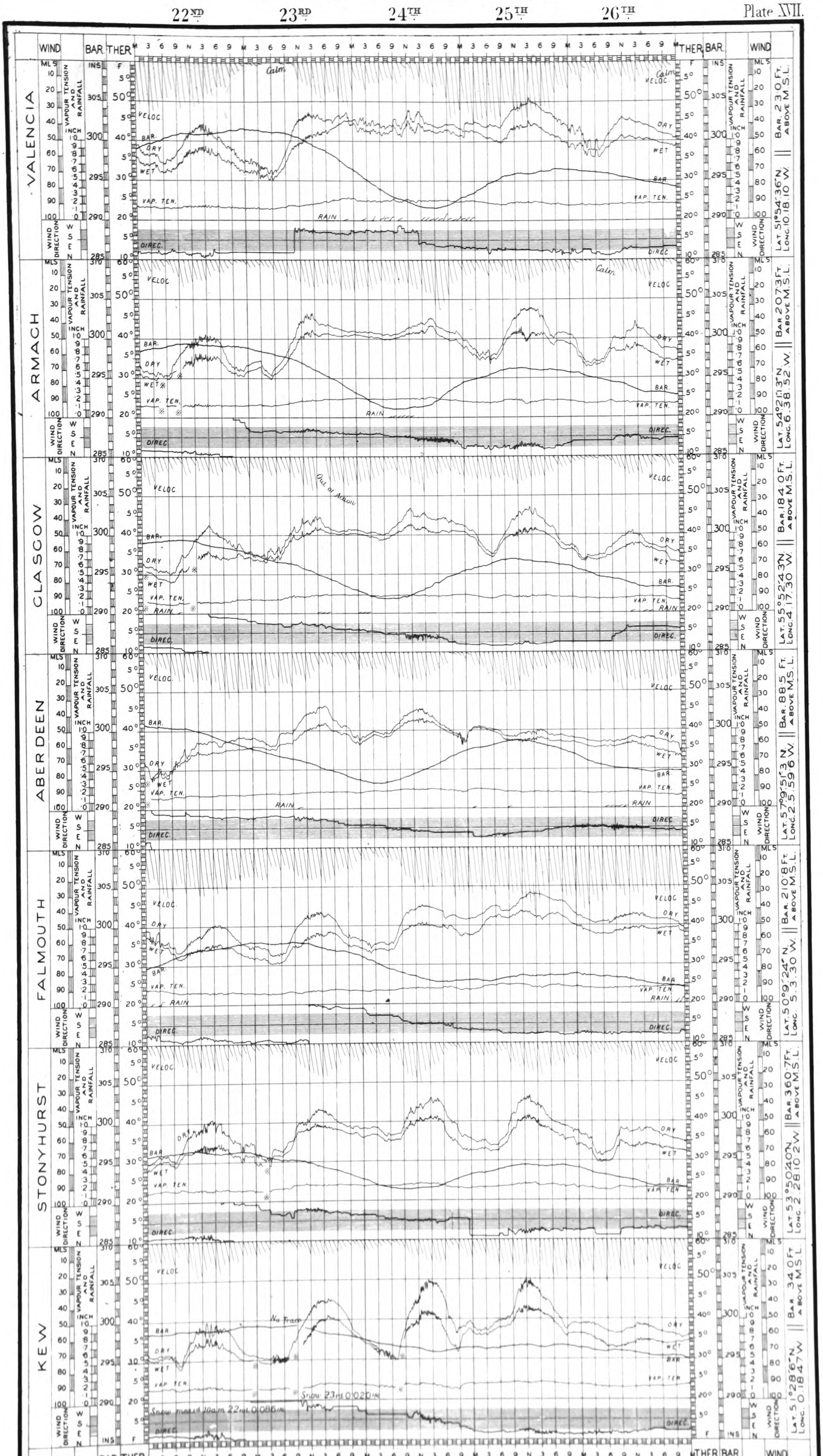
MARCH — 1876.

Plate XVI.



* No Trace or Out of Action

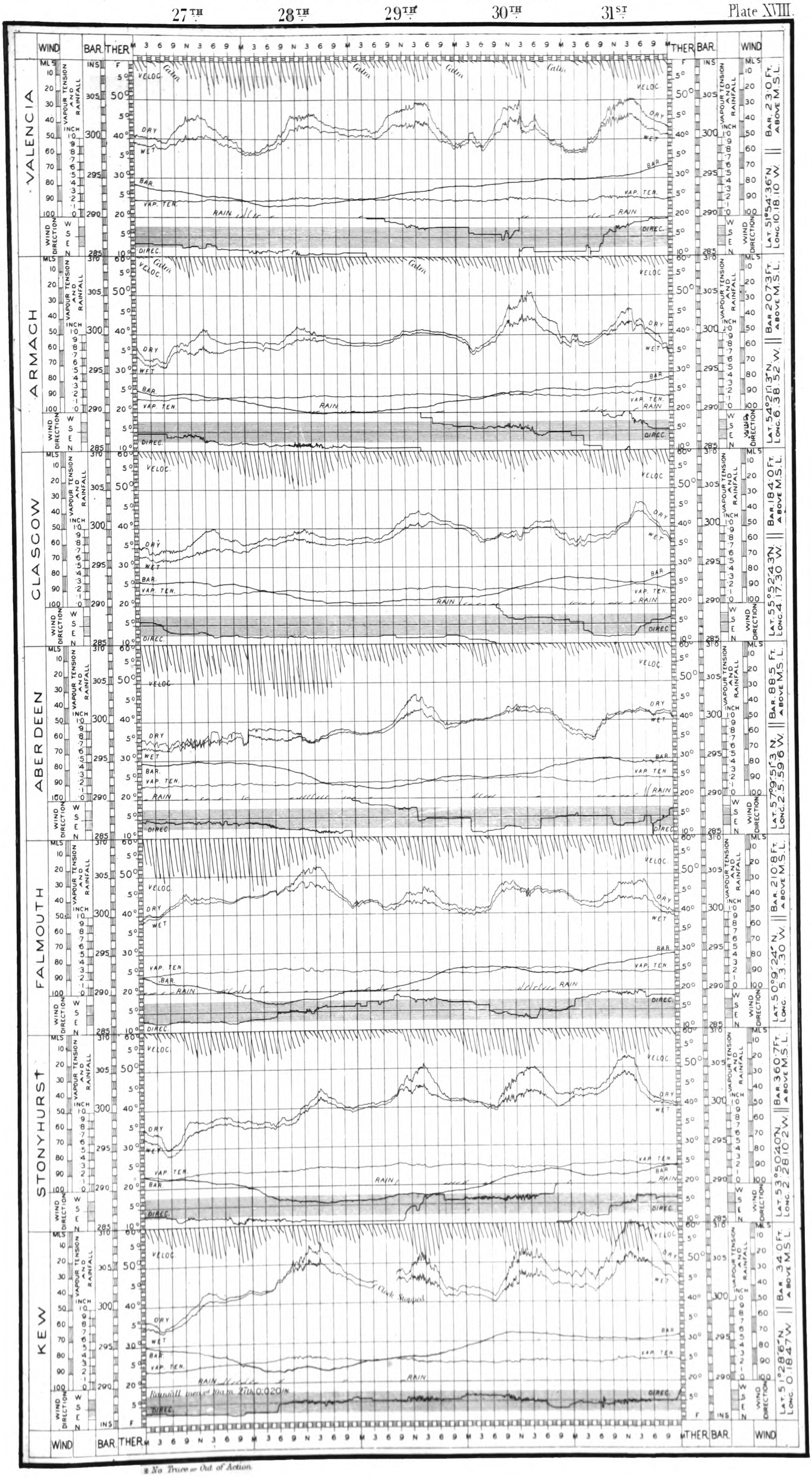
MARCH — 1876.



※ No Trace or Out of Action

MARCH — 1876.

27TH 28TH 29TH 30TH 31ST Plate XVIII.

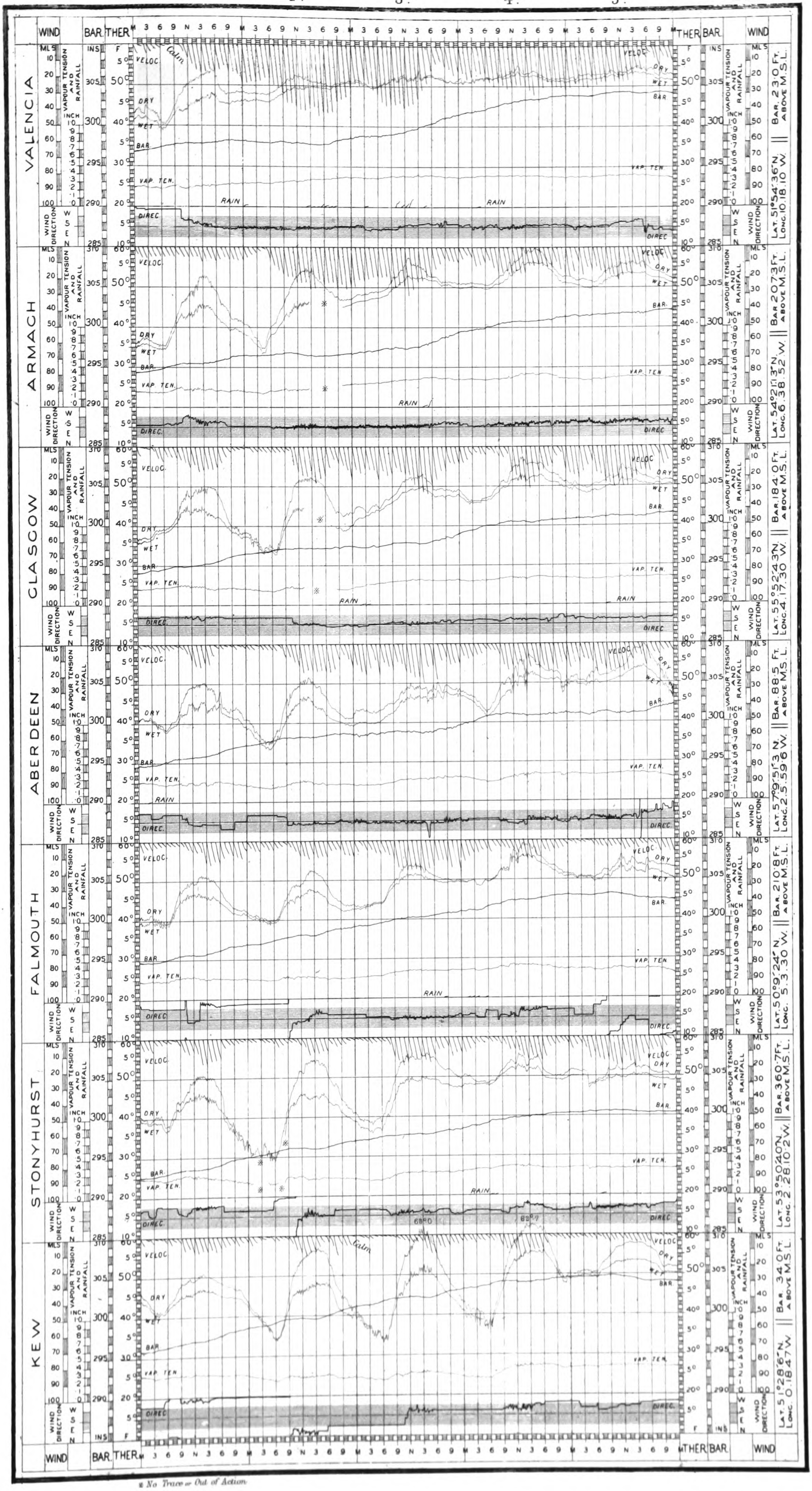


* No Trace or Out of Action

Plate XIX.

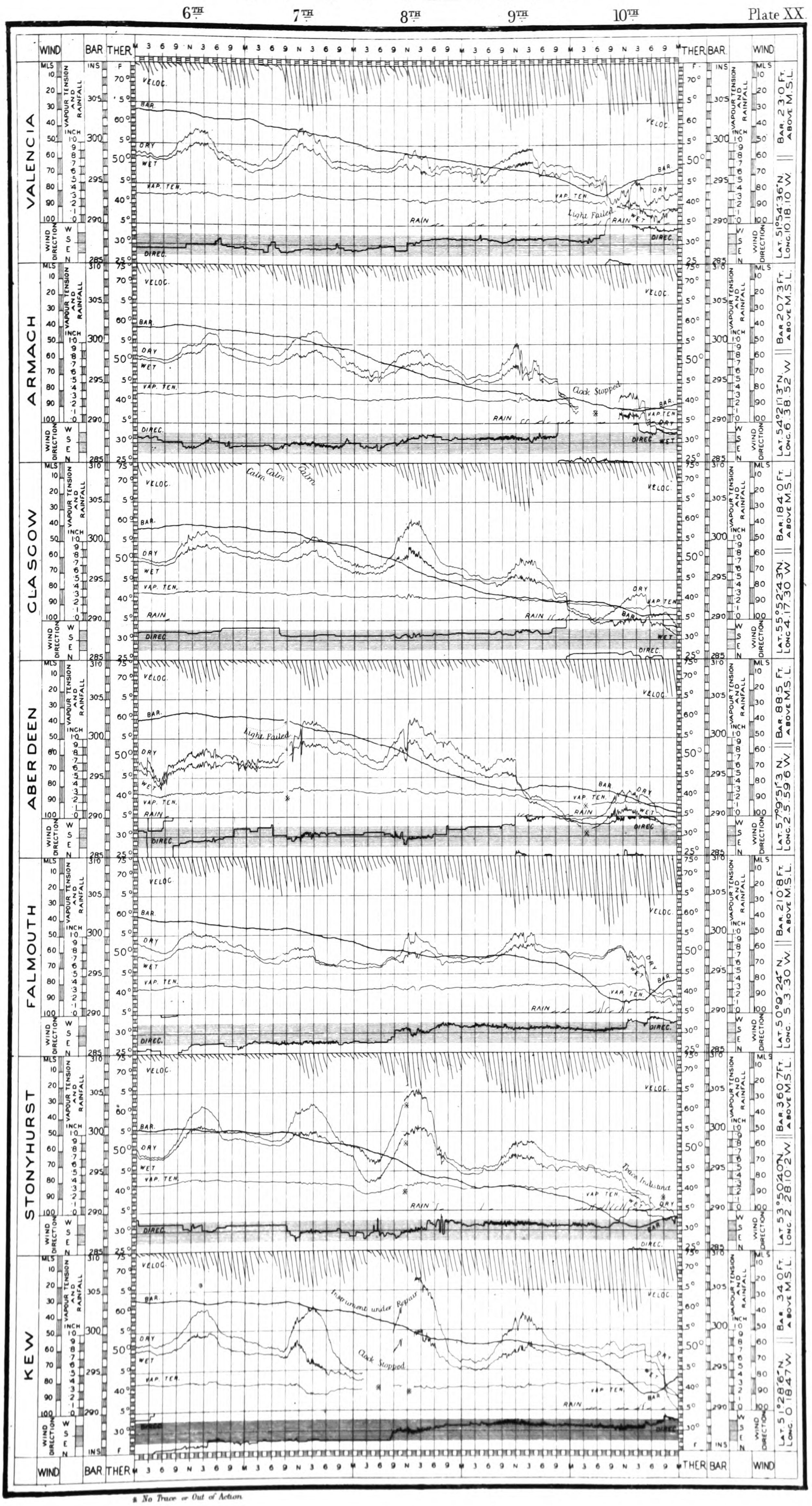
APRIL —— 1876.

1st 2nd 3rd 4th 5th



* No Trace or Out of Action

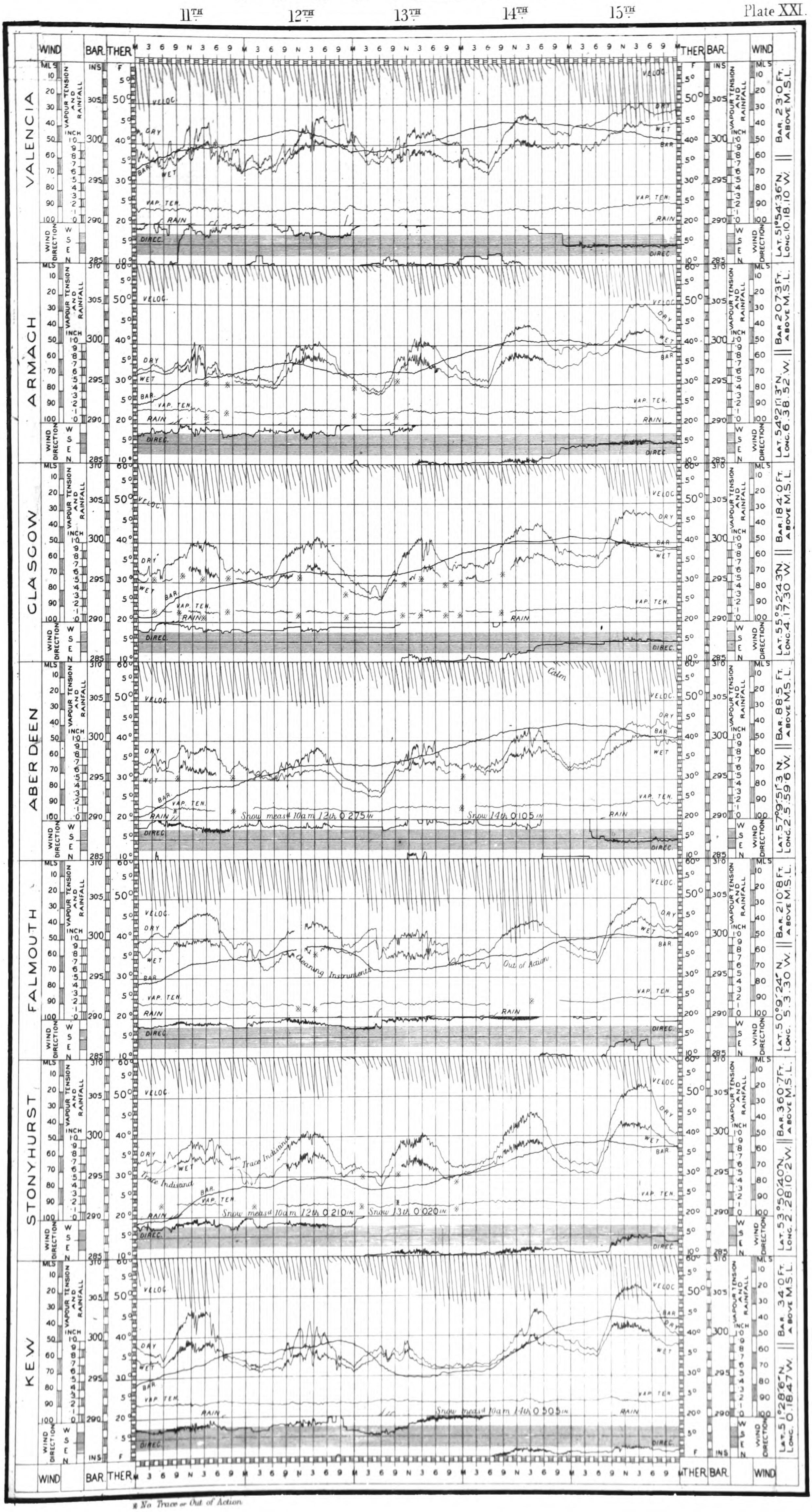
APRIL — 1876.



* No Trace or Out of Action

APRIL —— 1876.

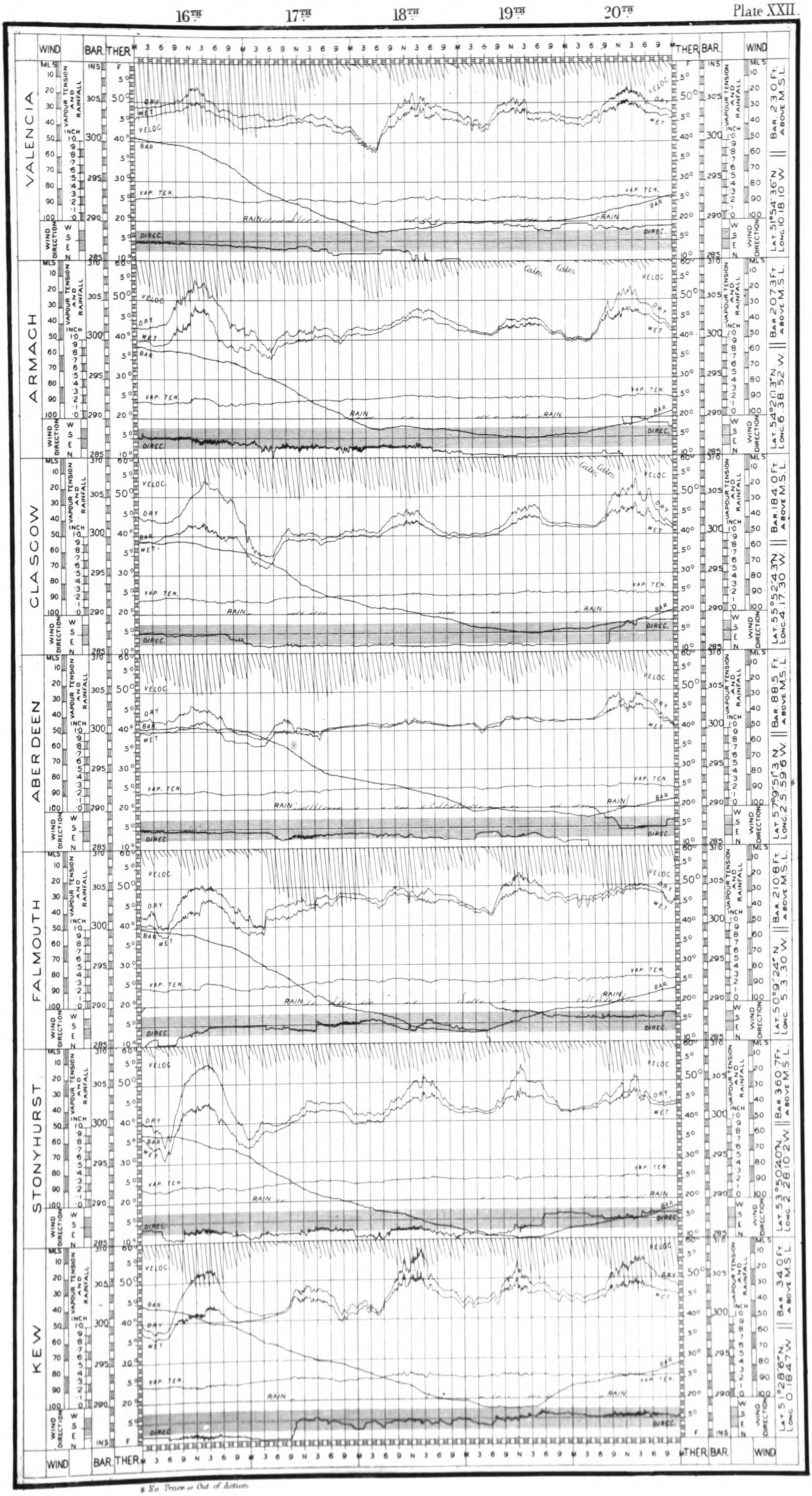
Plate XXI.



* No Trace or Out of Action

APRIL —— 1876.

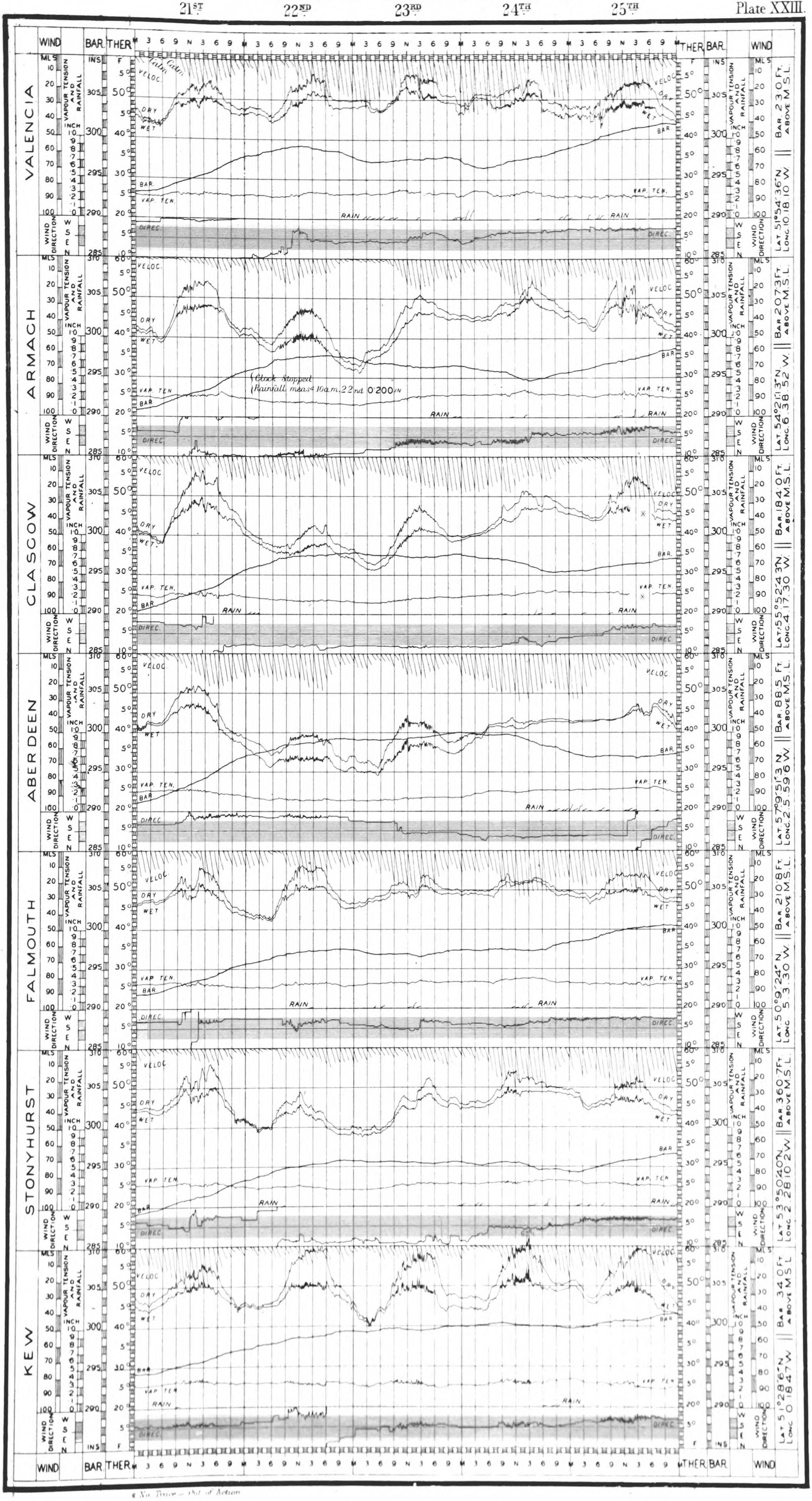
Plate XXII.



* No Trace = Out of Action

APRIL ___ 1876.

Plate XXIII.

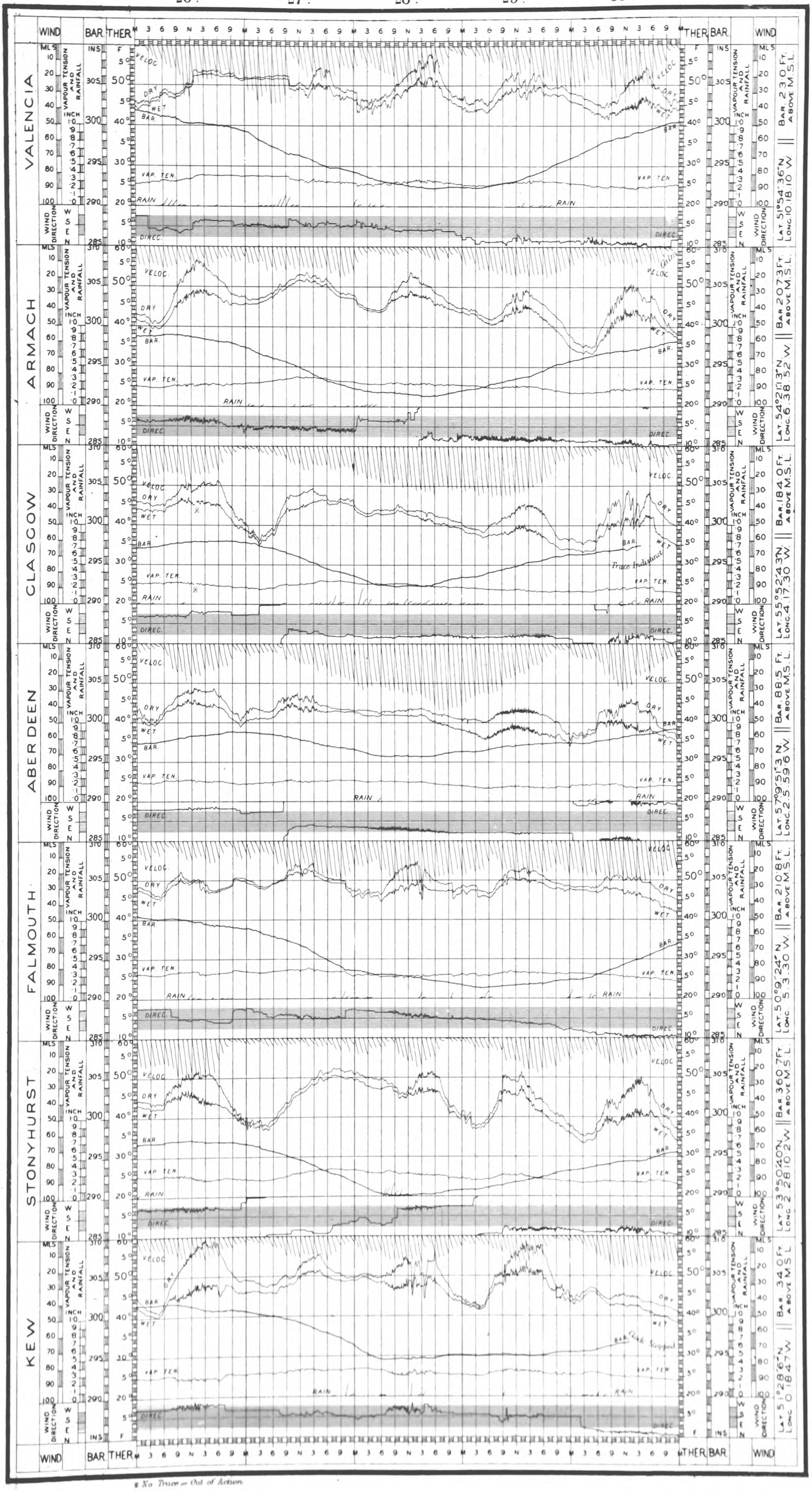


* No Trace = Out of Action

APRIL ——— 1876.

26TH 27TH 28TH 29TH 30TH

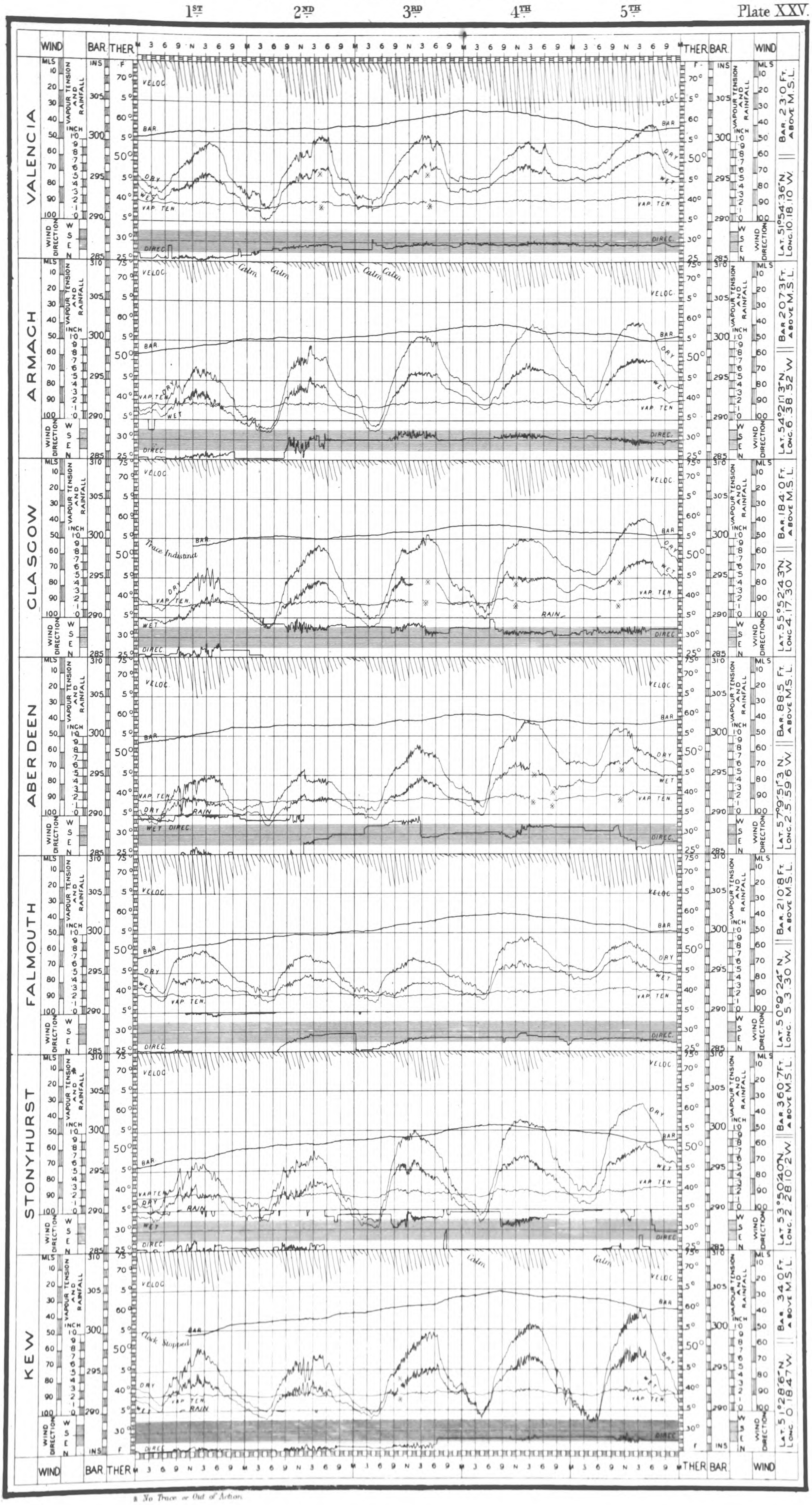
Plate XXIV.



* No Trace = Out of Action.

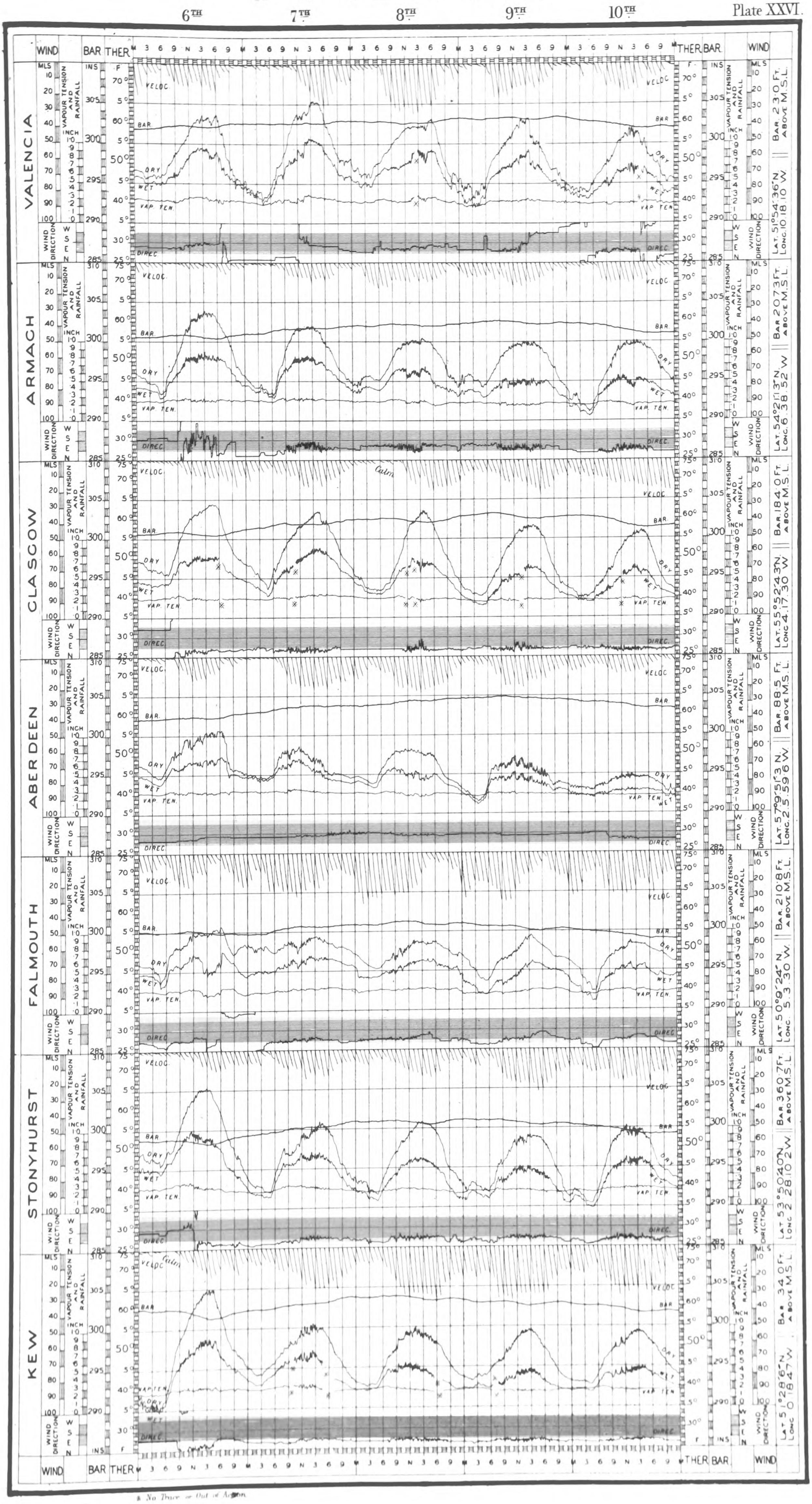
MAY — 1876.

Plate XXV.



* No Trace or Out of Action.

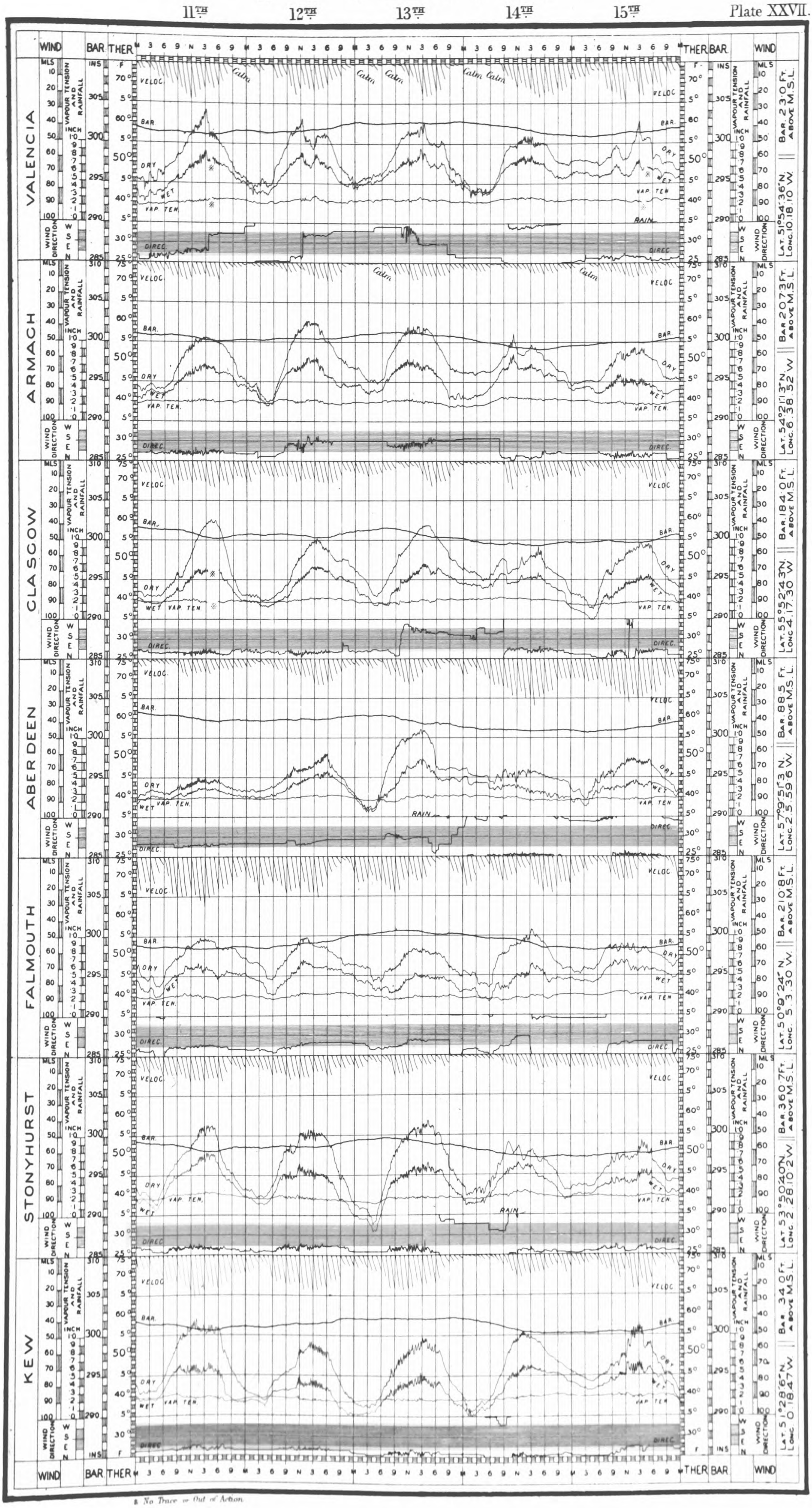
MAY — 1876. Plate XXVI.



* No Trace or Out of Action.

M A Y — 1 8 7 6.

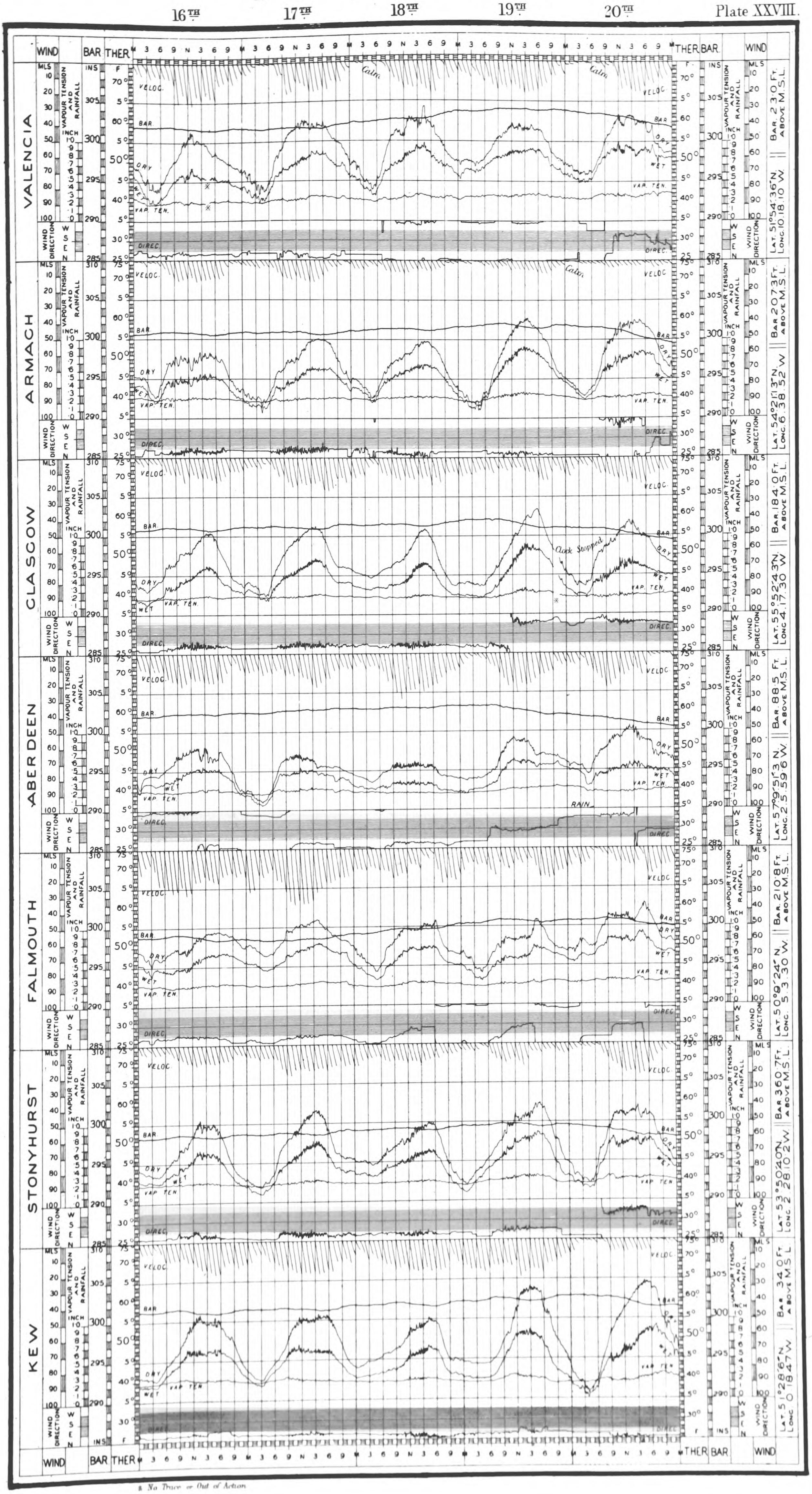
Plate XXVII.



* No Trace or Out of Action

M A Y —— 1 8 7 6.

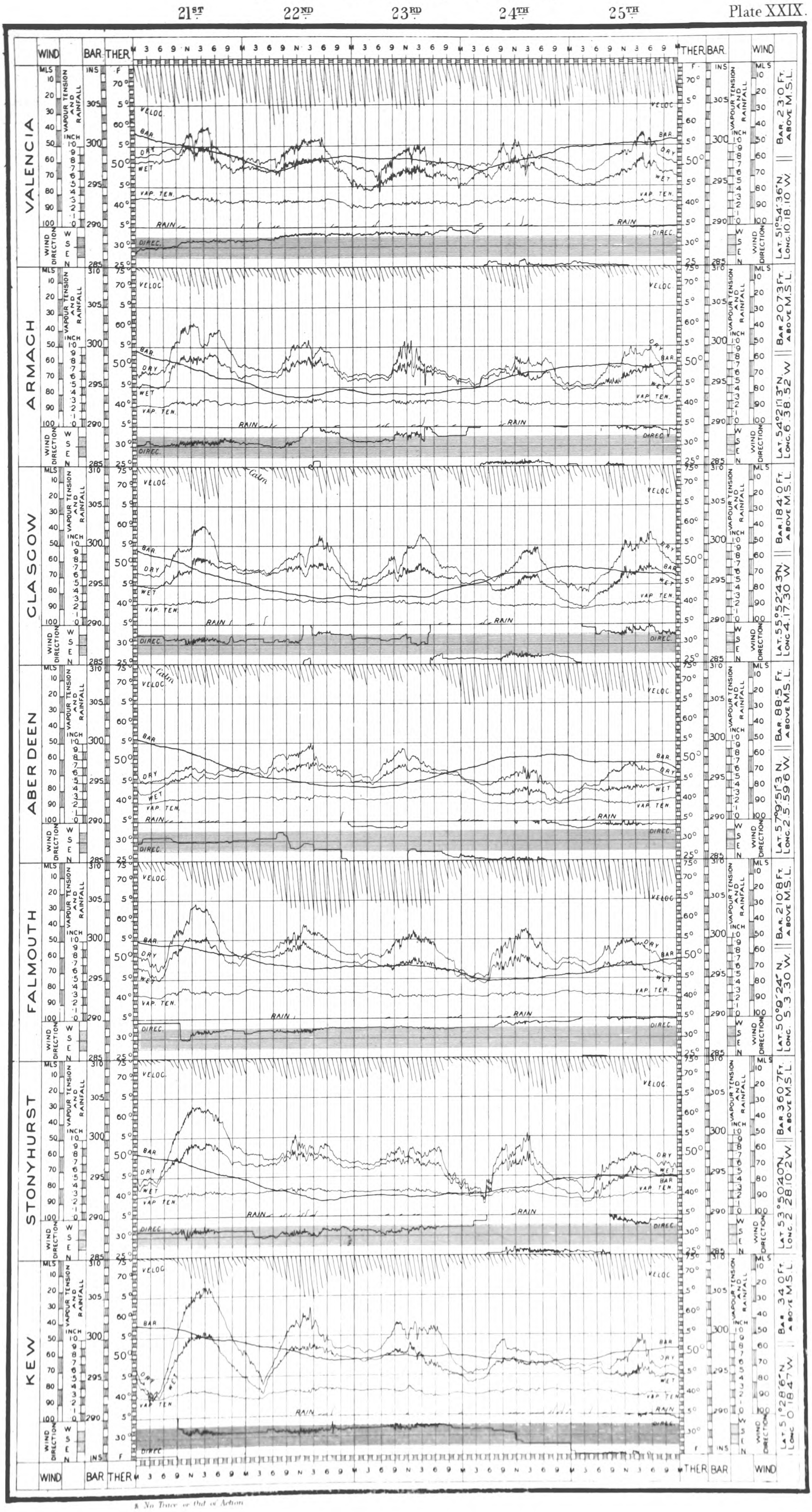
Plate XXVIII.



× No Trace or Out of Action

MAY —— 1876.

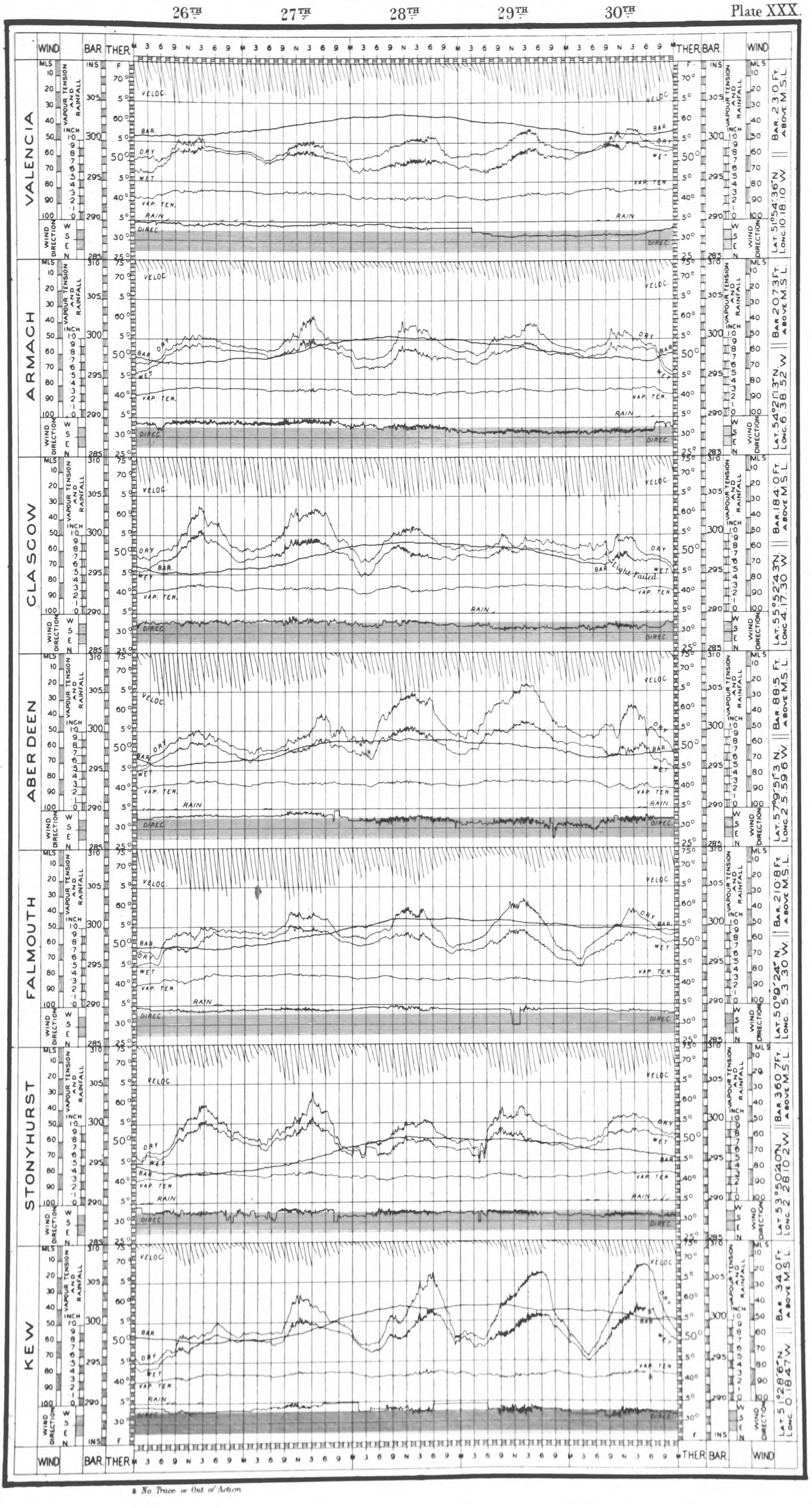
Plate XXIX.



* No Trace or Out of Action

M A Y —— 1876.

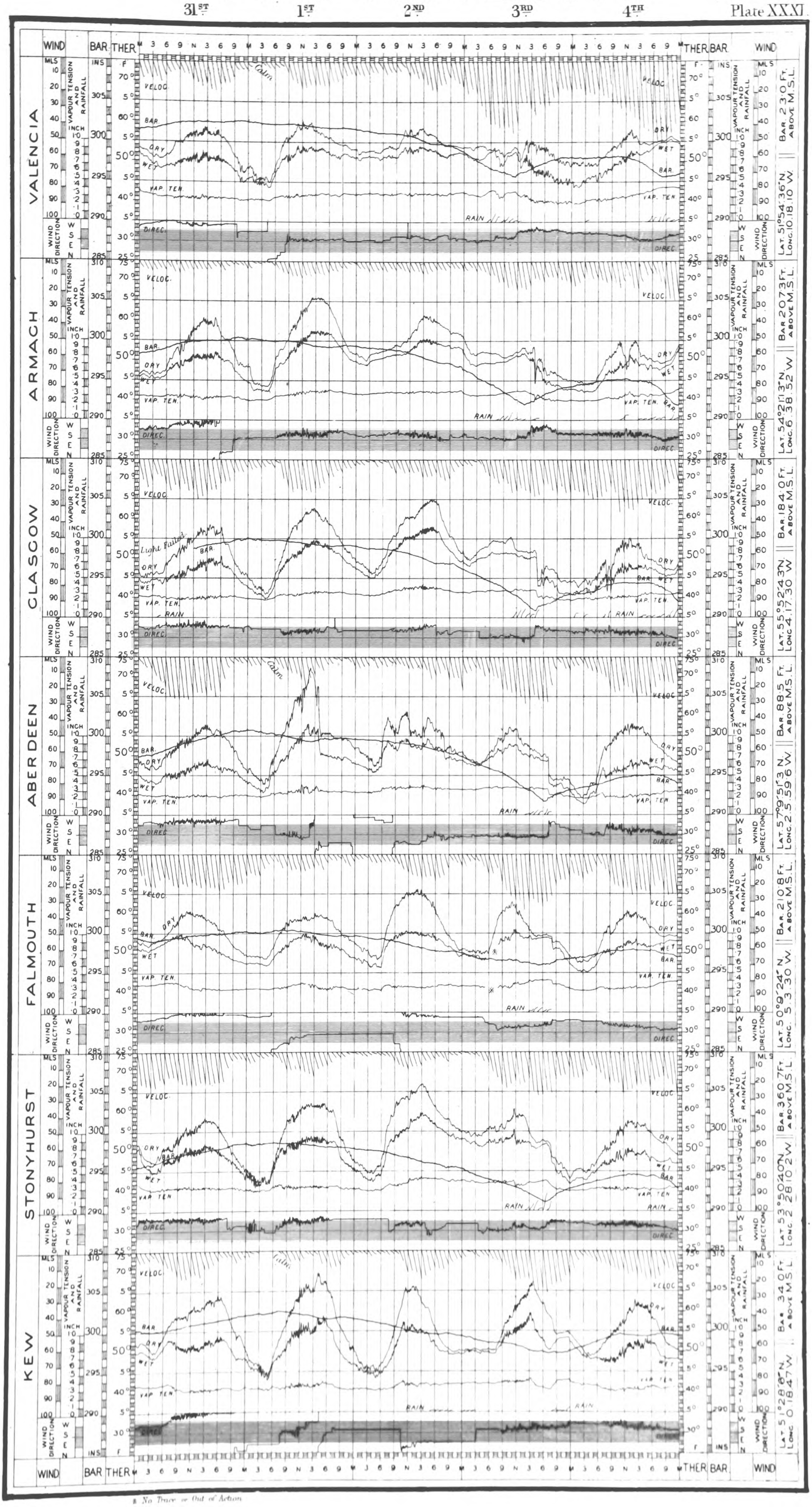
Plate XXX.



▮ No Trace or Out of Action

Plate XXXI.

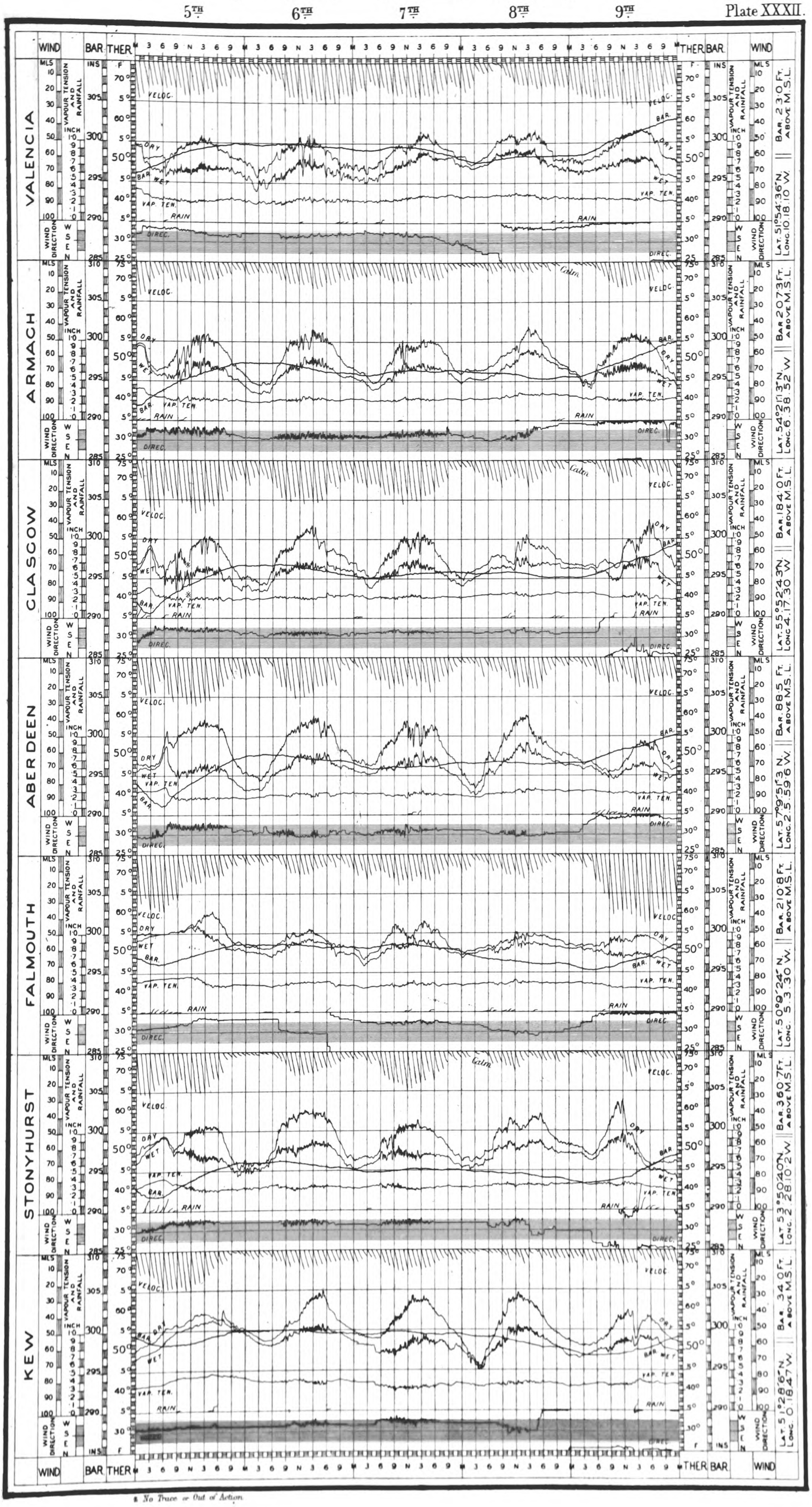
MAY & JUNE — 1876.



* No Trace or Out of Action

J U N E ——— 1876.

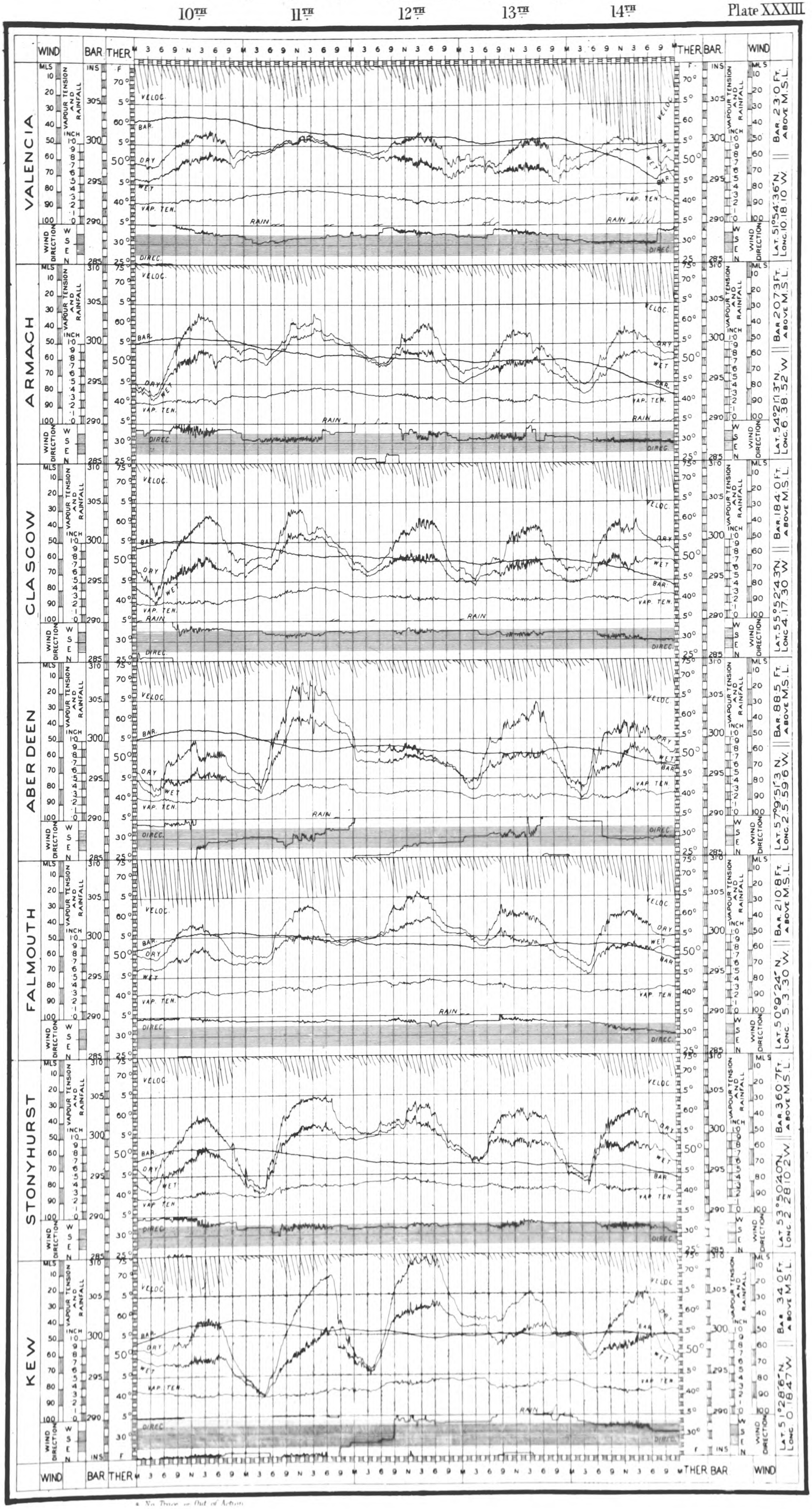
Plate XXXII.



* No Trace or Out of Action.

JUNE — 1876.

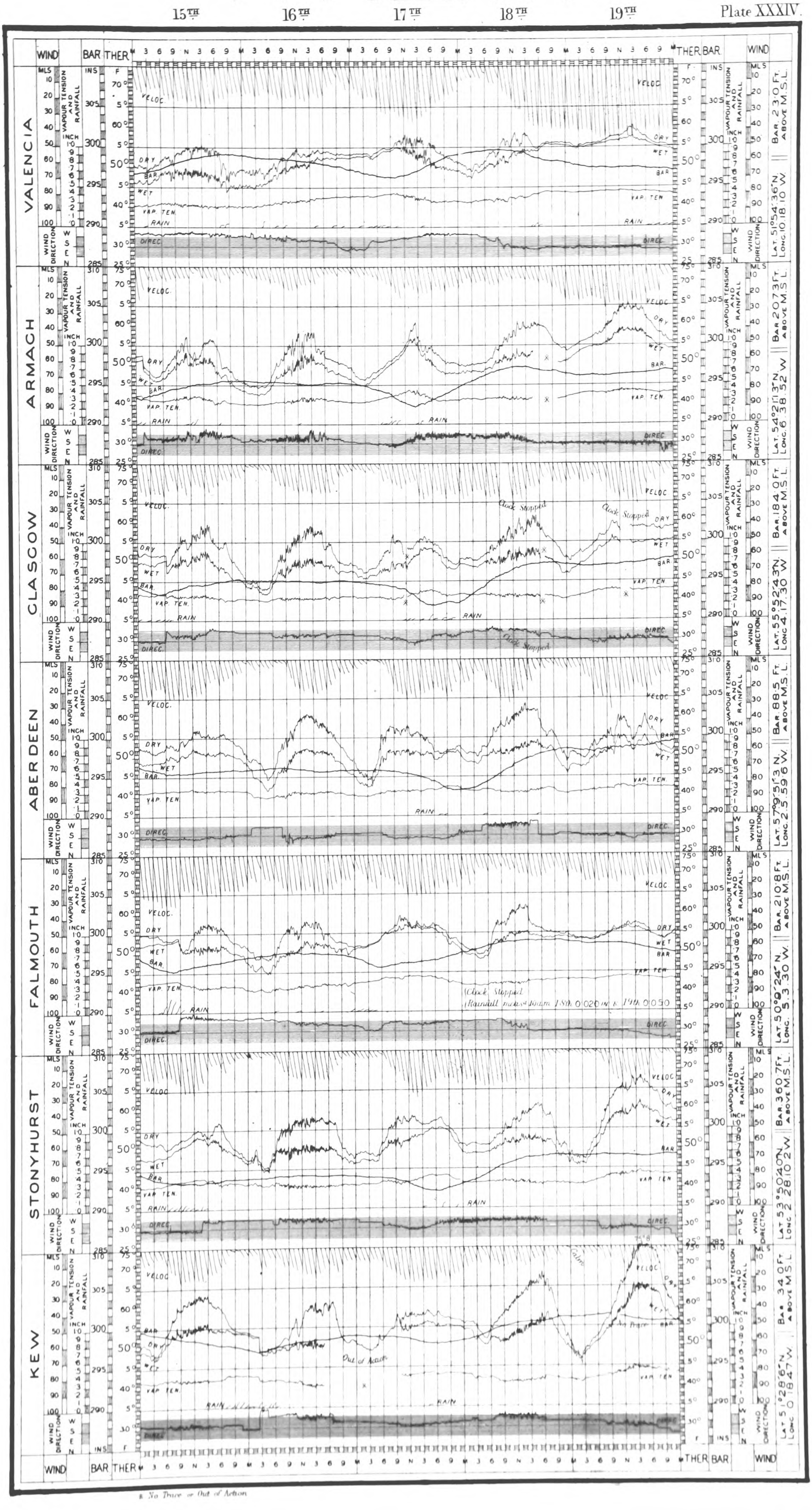
Plate XXXIII



* No Trace or Out of Action

JUNE —— 1876.

Plate XXXIV.

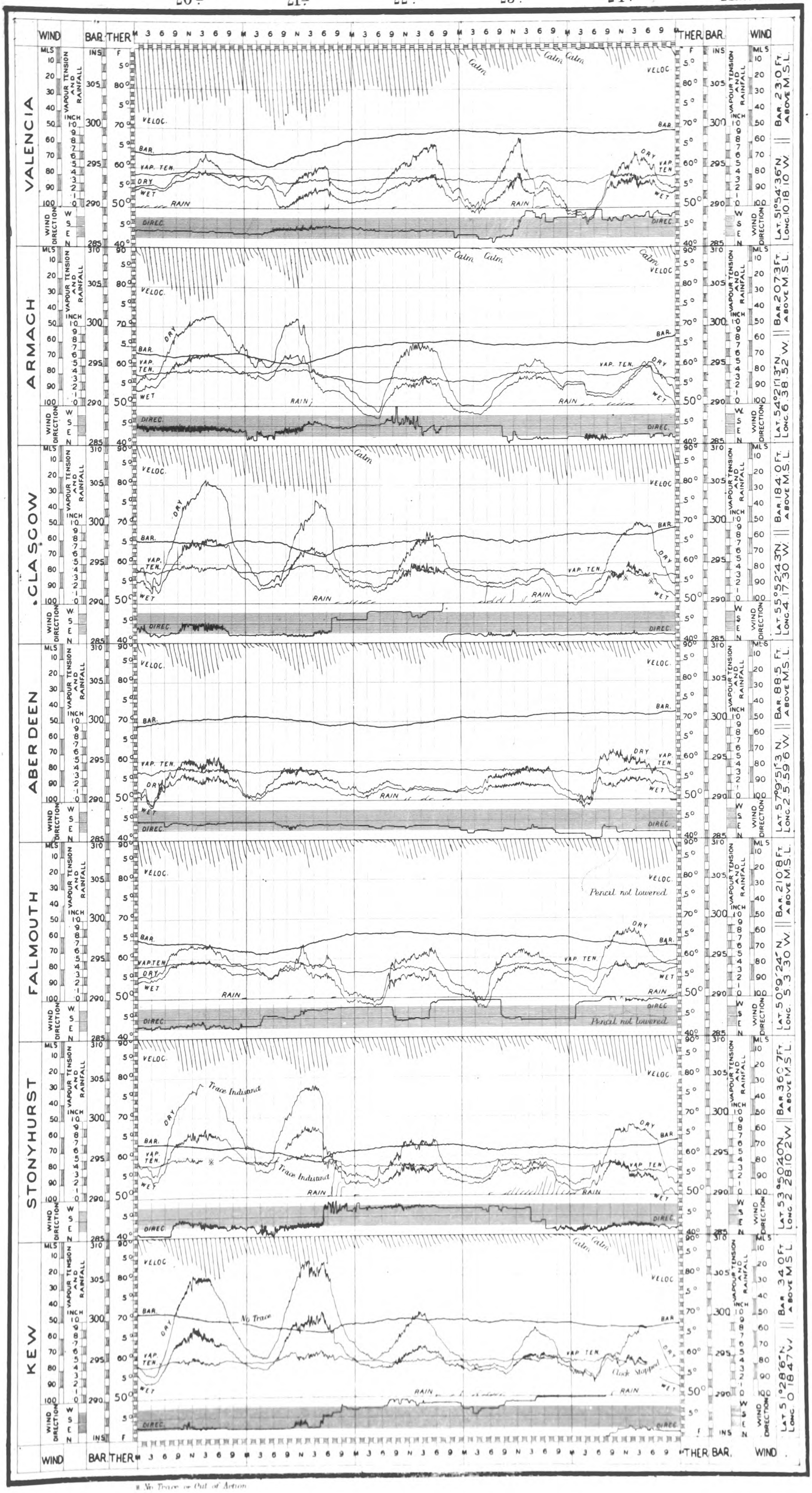


× No Trace or Out of Action

JUNE — 1876.

20TH 21ST 22ND 23RD 24TH

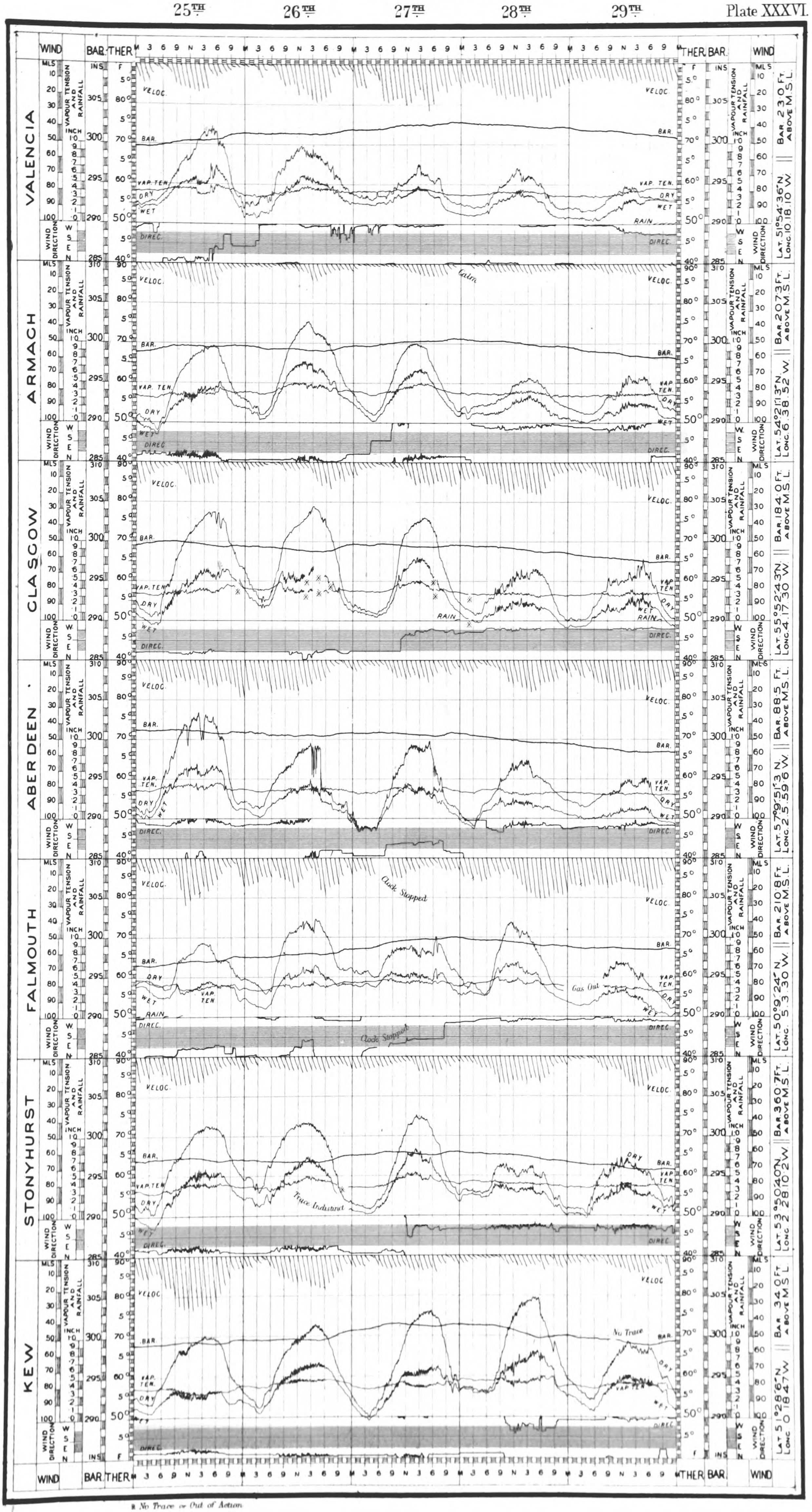
Plate XXXV.



■ No Trace or Out of Action

JUNE — 1876.

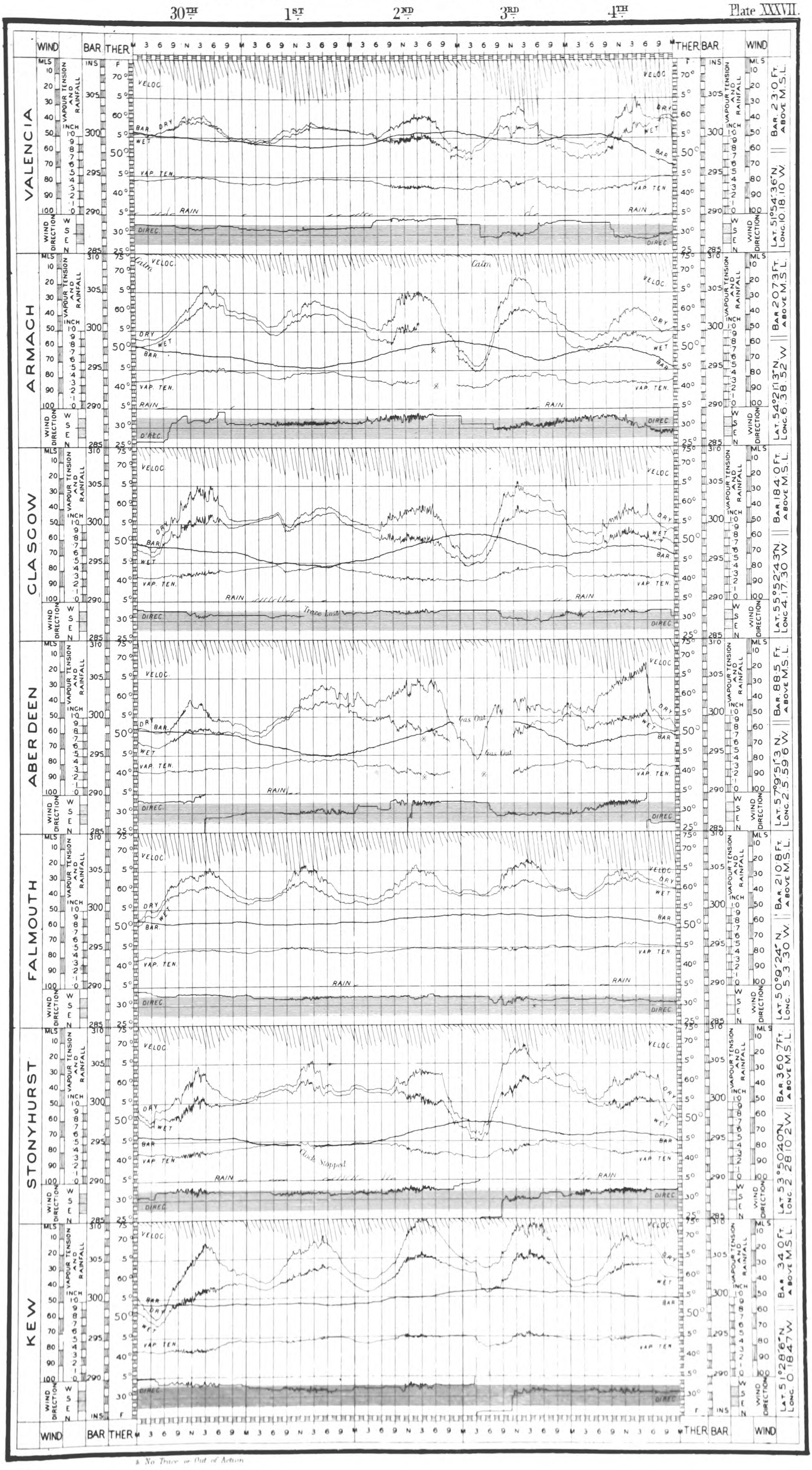
Plate XXXVI.



* No Trace or Out of Action

JUNE & JULY _ 1876.

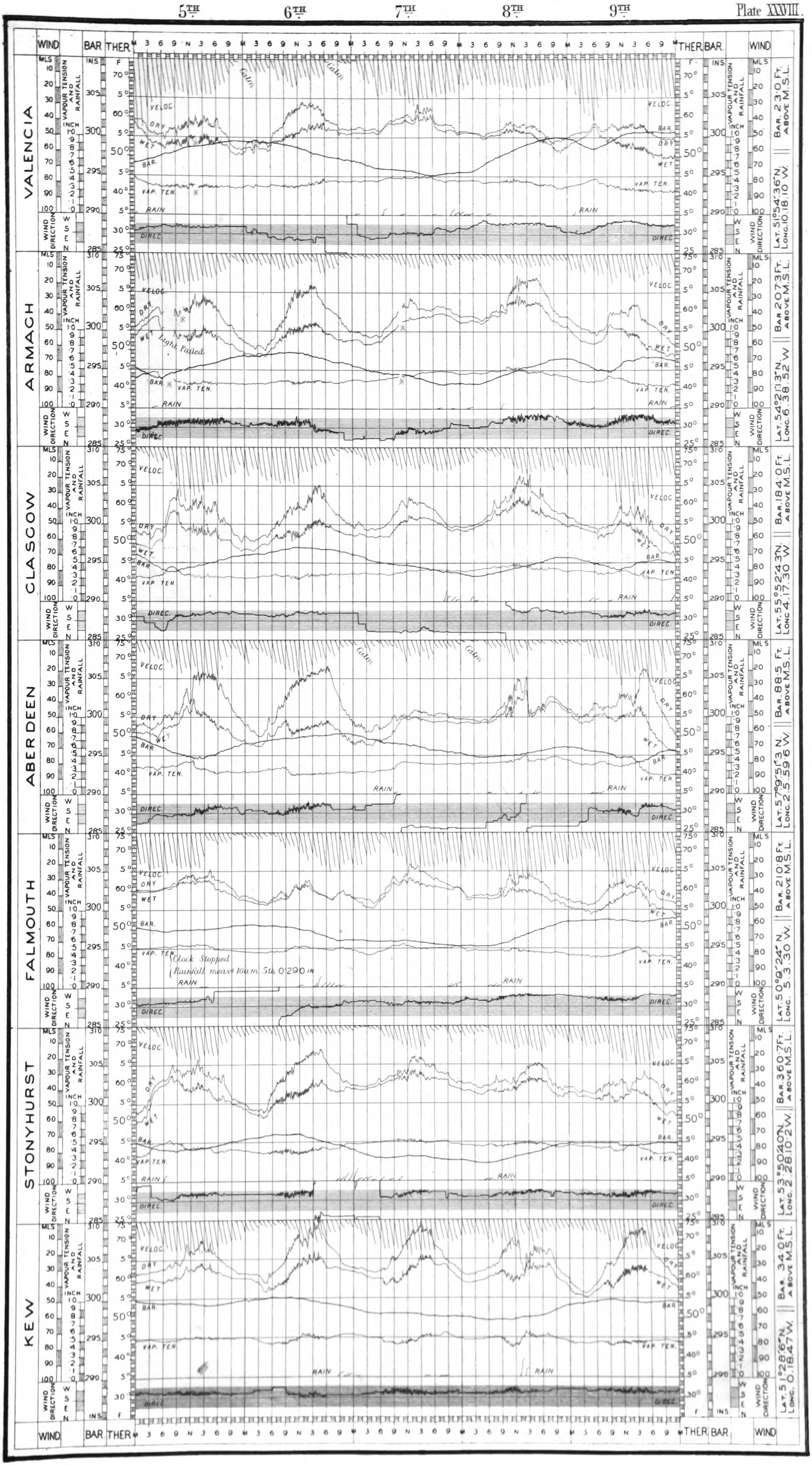
Plate XXXVII.



× No Trace or Out of Action

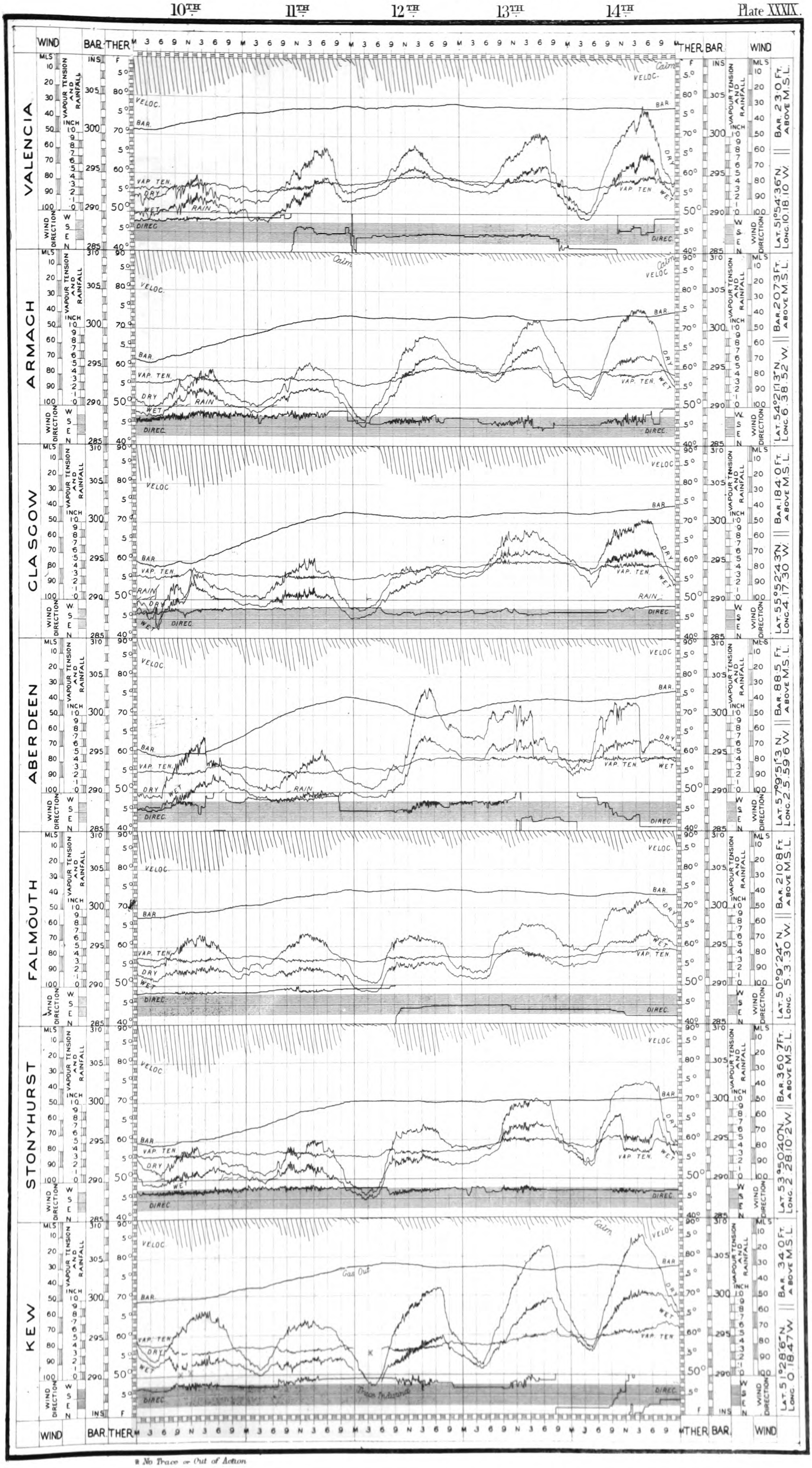
J U L Y — 1 8 7 6.

Plate XXVIII.



J U L Y — 1 8 7 6.

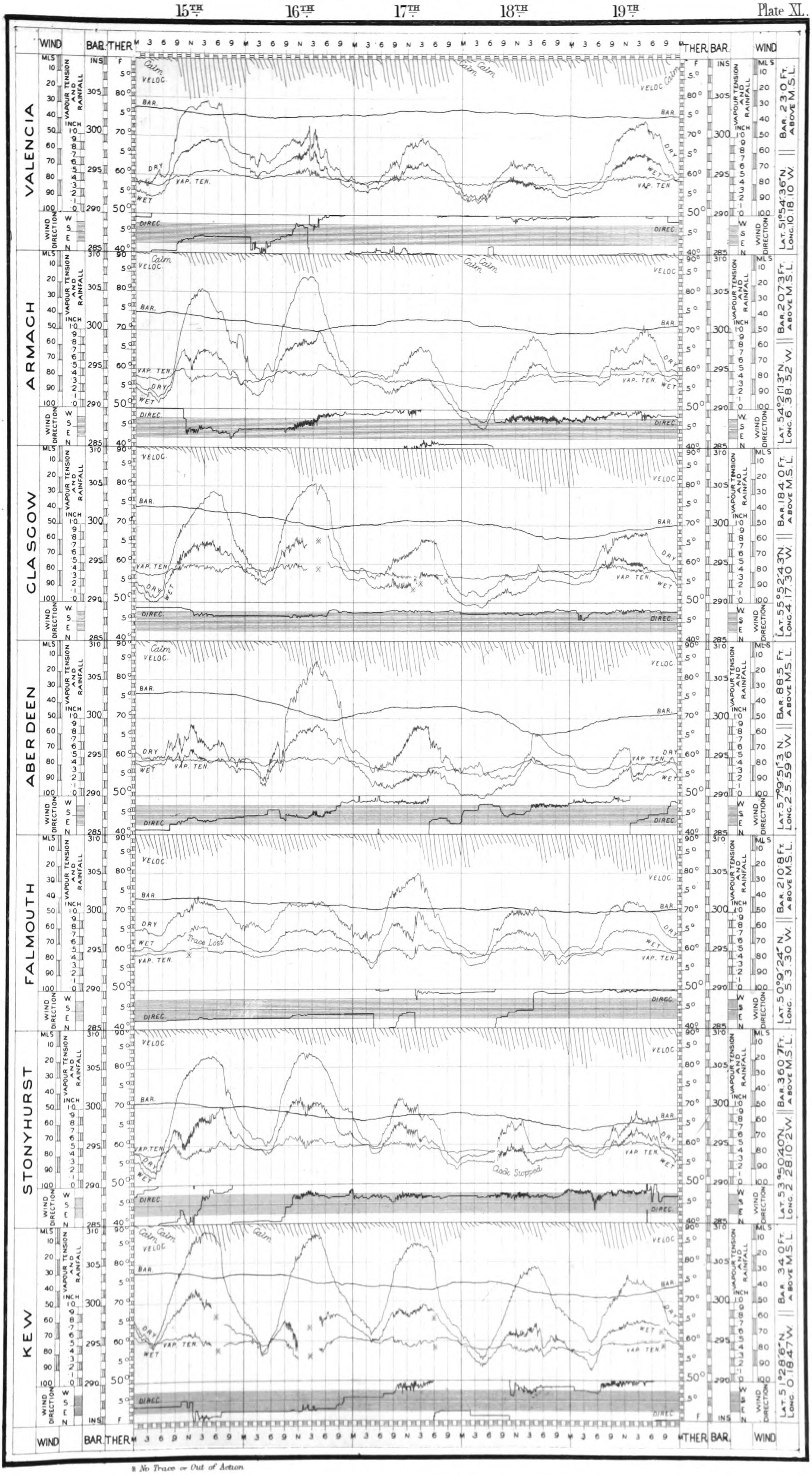
Plate XXXIX.



* No Trace or Out of Action

J U L Y — 1 8 7 6.

Plate XI.



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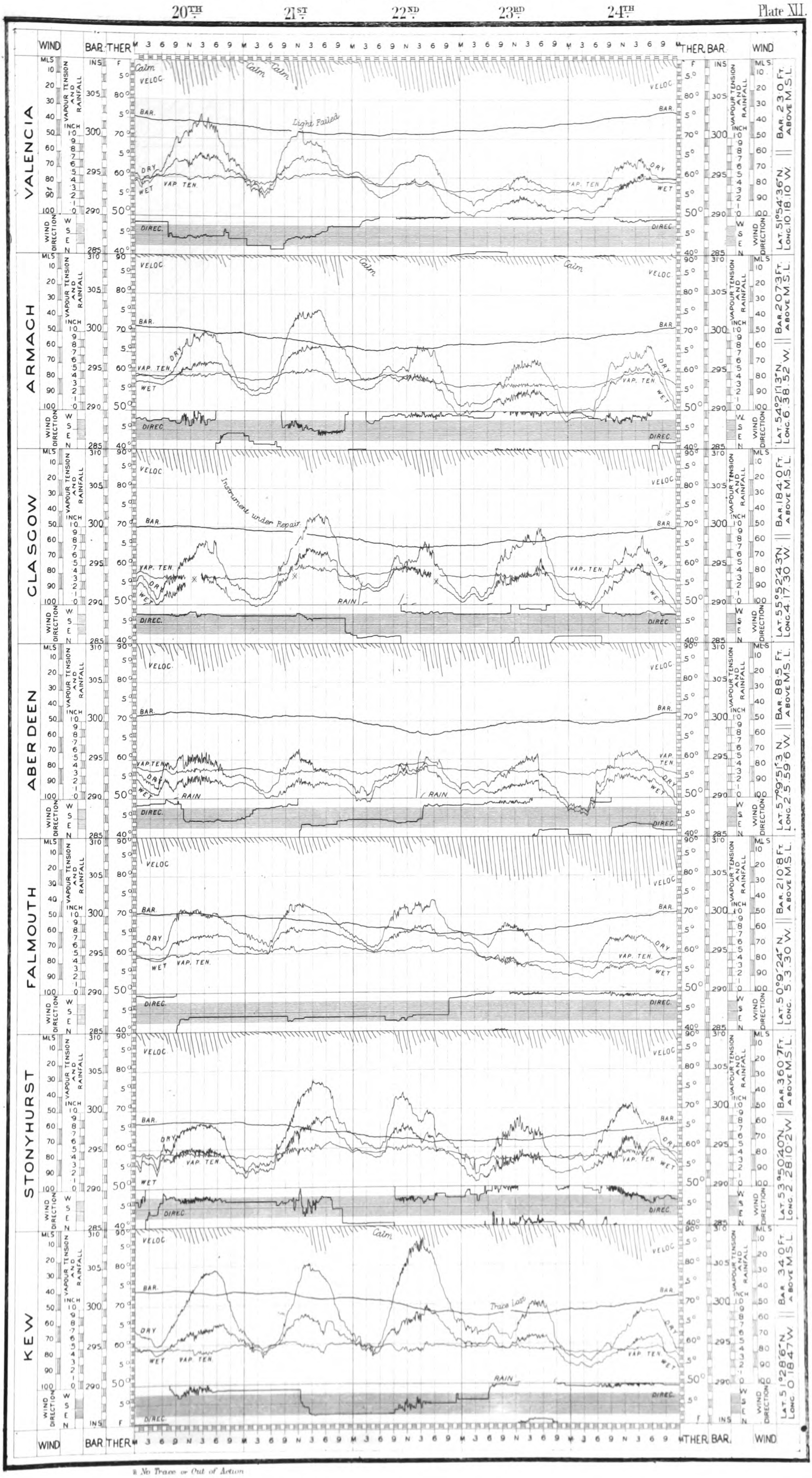
JULY — 1876.

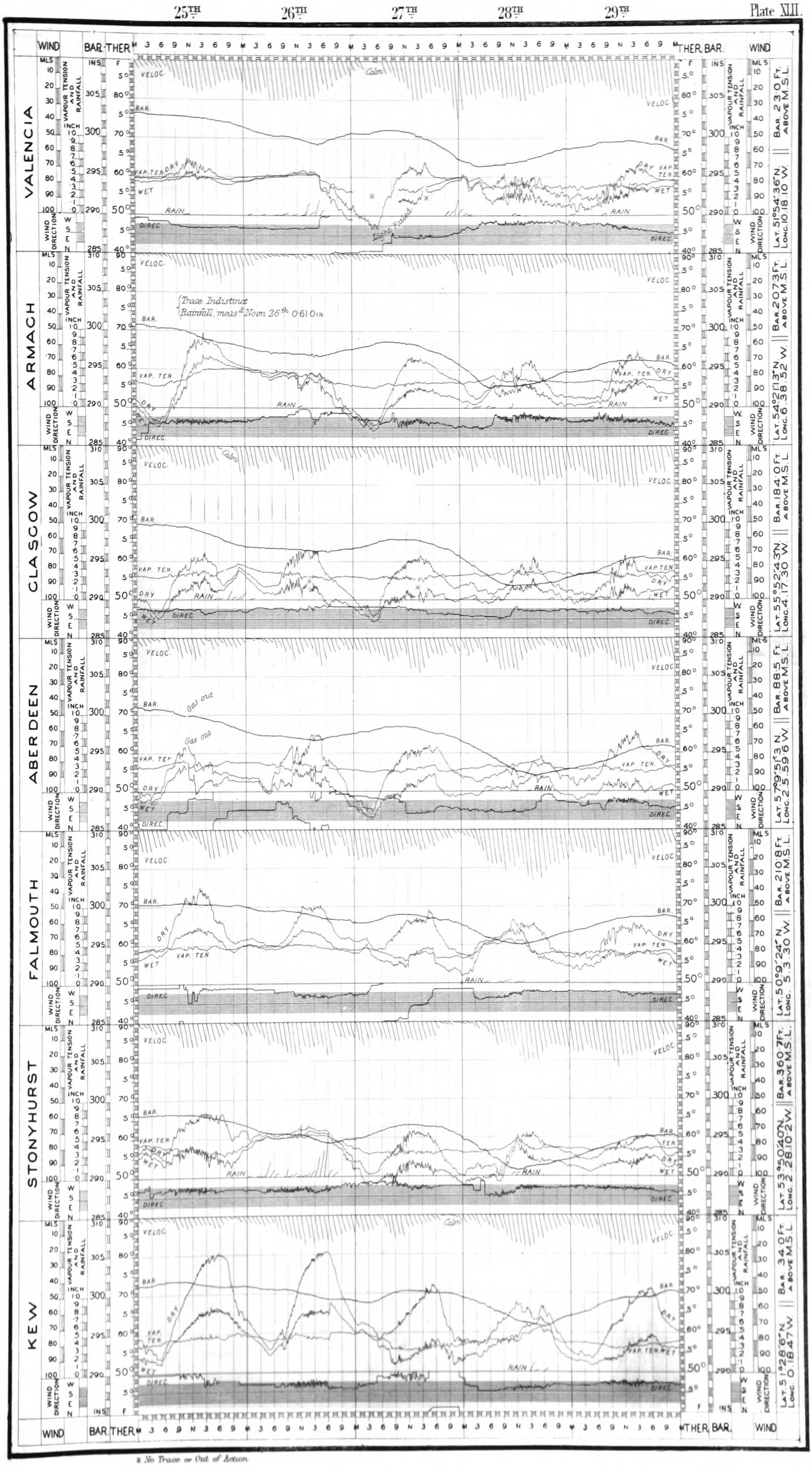
Plate XII.



X No Trace or Out of Action

JULY — 1876.

Plate XIII.

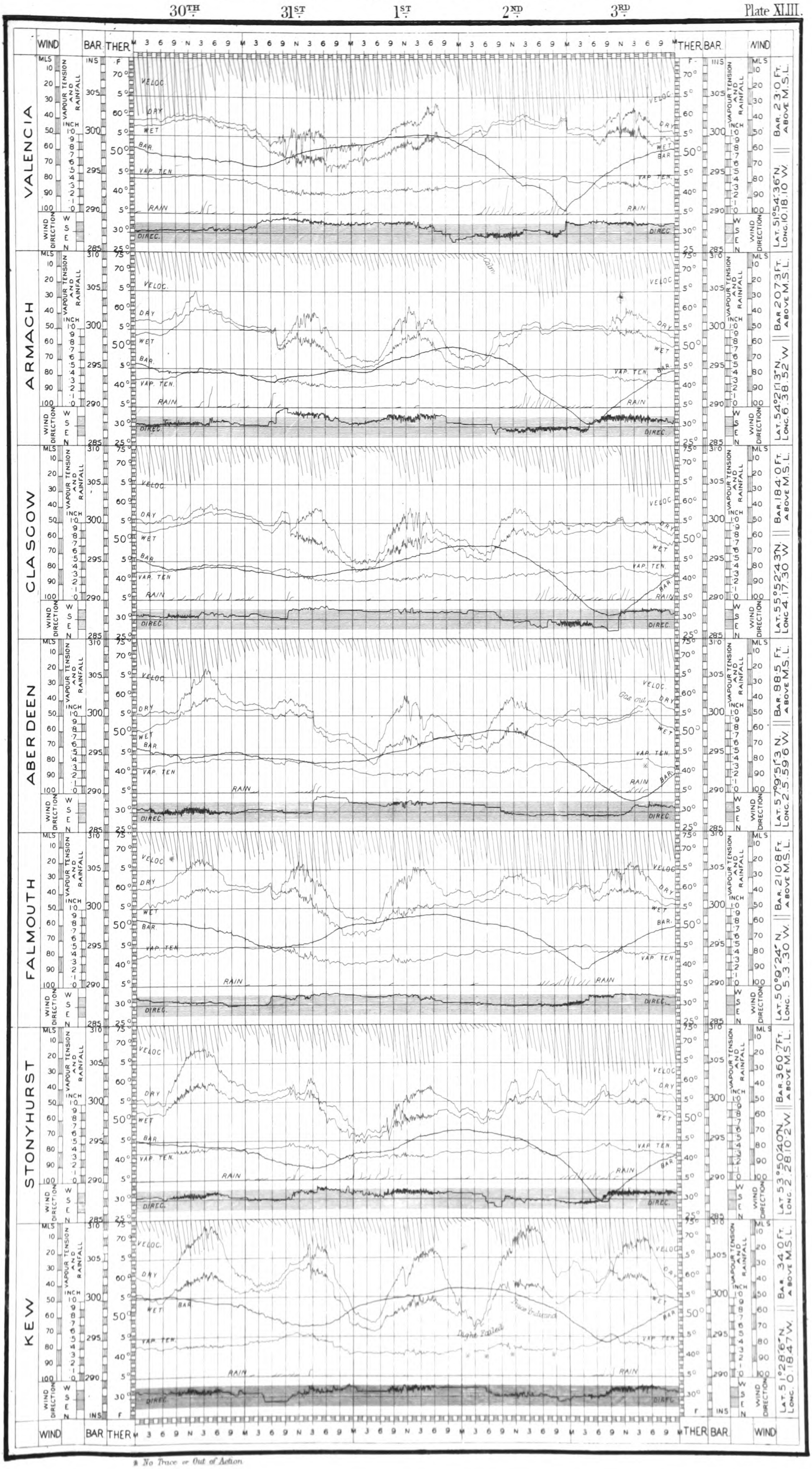


※ No Trace or Out of Action

JULY & AUGUST — 1876.

30TH. 31ST. 1ST. 2ND. 3RD.

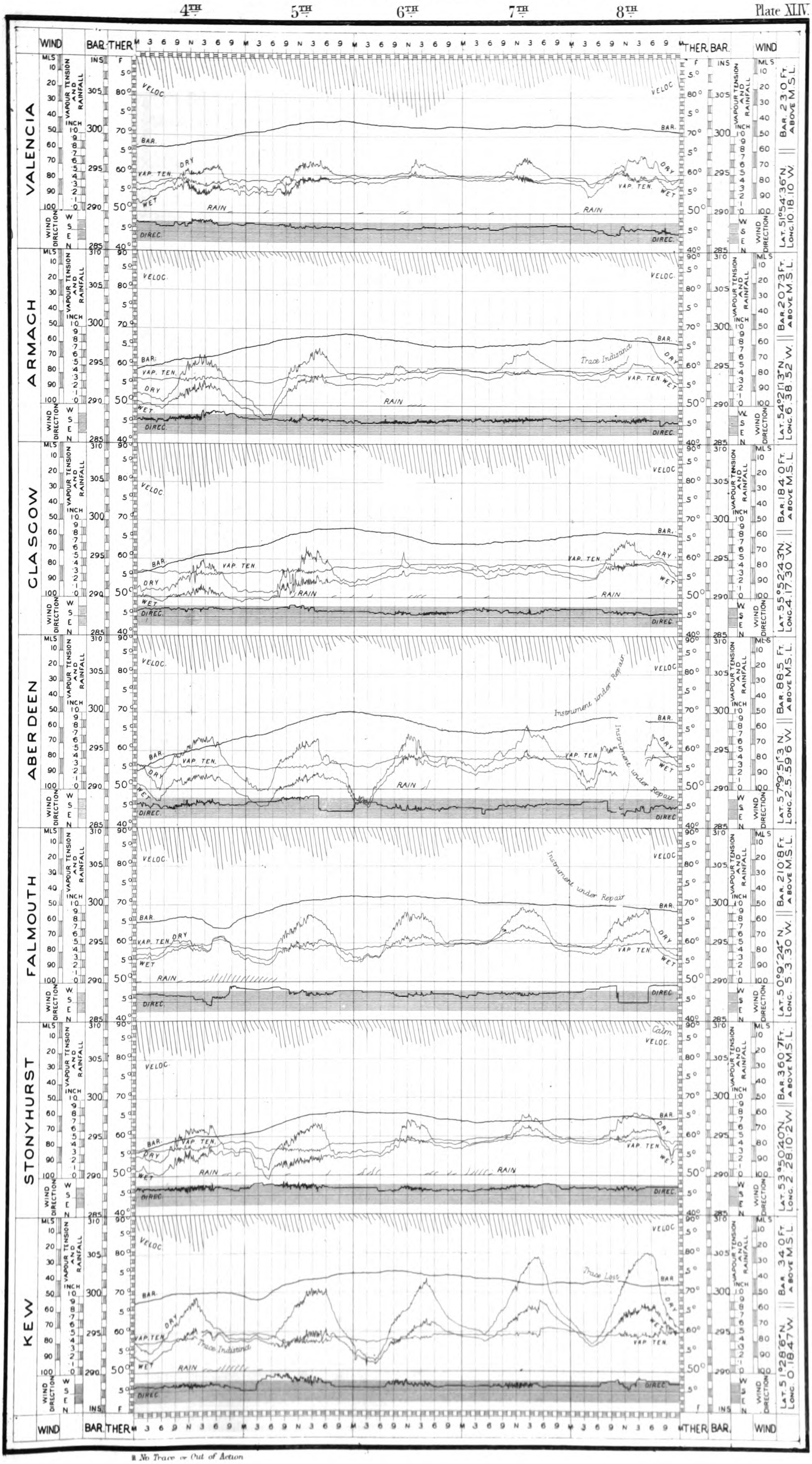
Plate XLIII.



* No Trace or Out of Action

AUGUST — 1876.

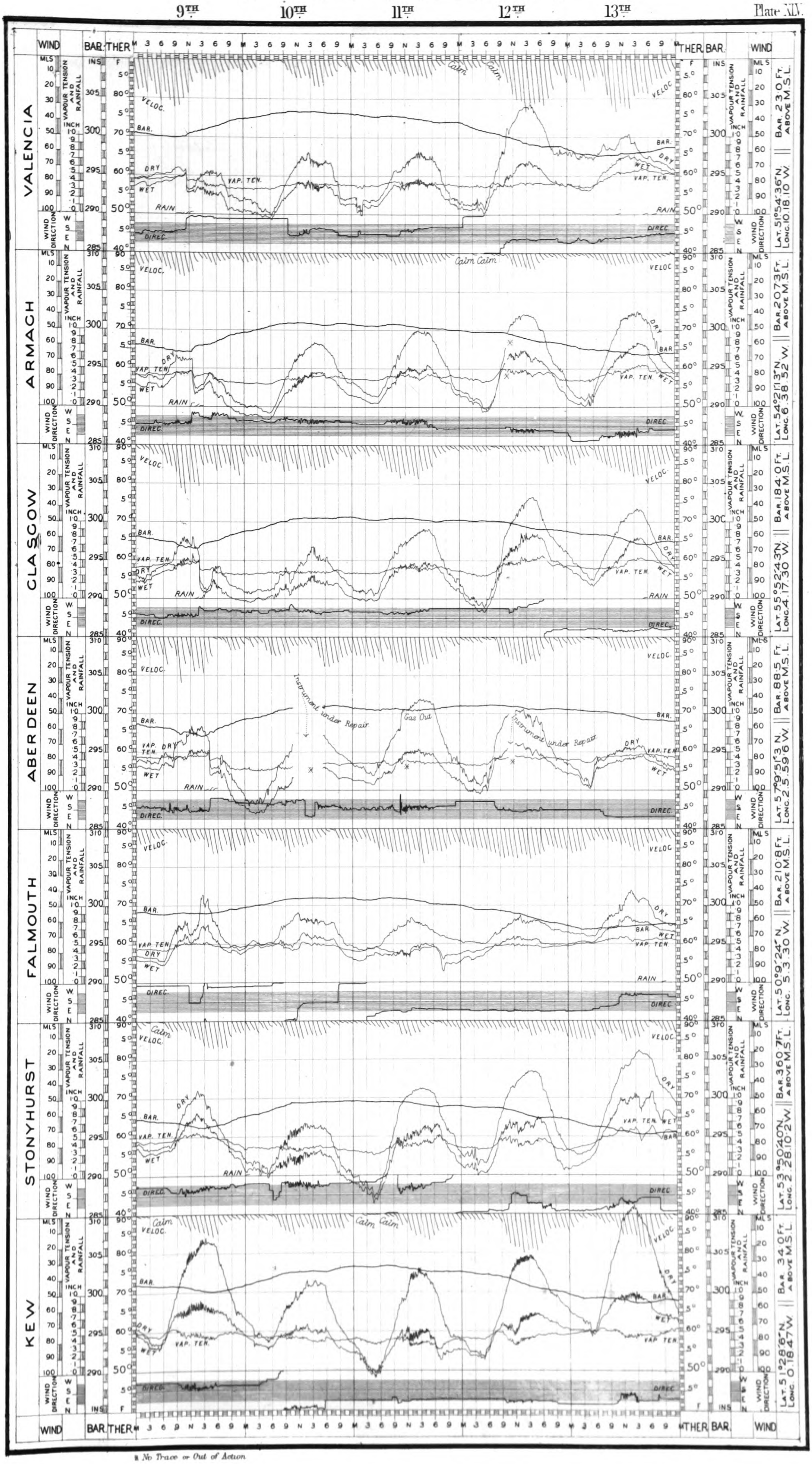
4th 5th 6th 7th 8th



■ No Trace or Out of Action

AUGUST — 1876.

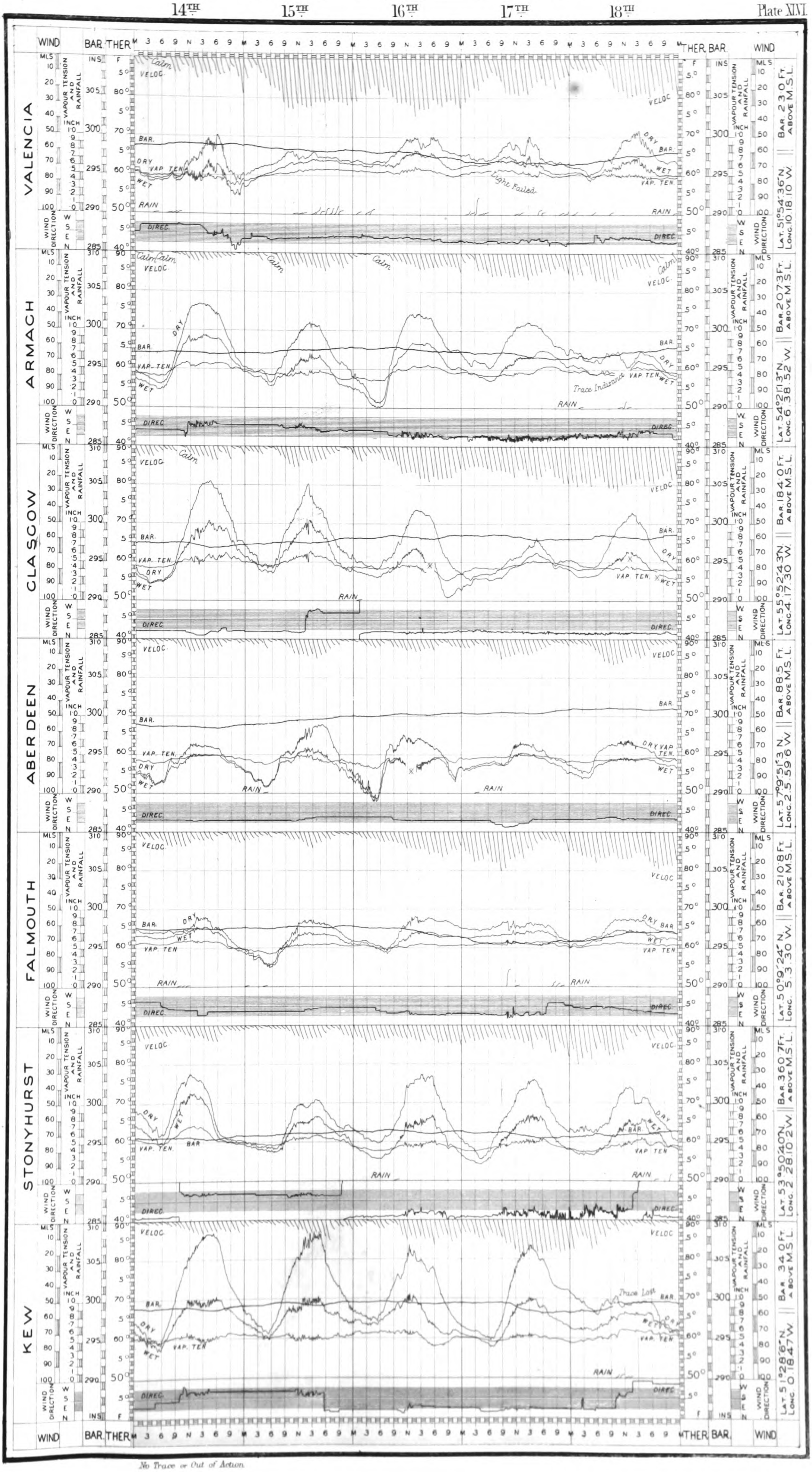
Plate XLV.



✱ No Trace or Out of Action

AUGUST — 1876

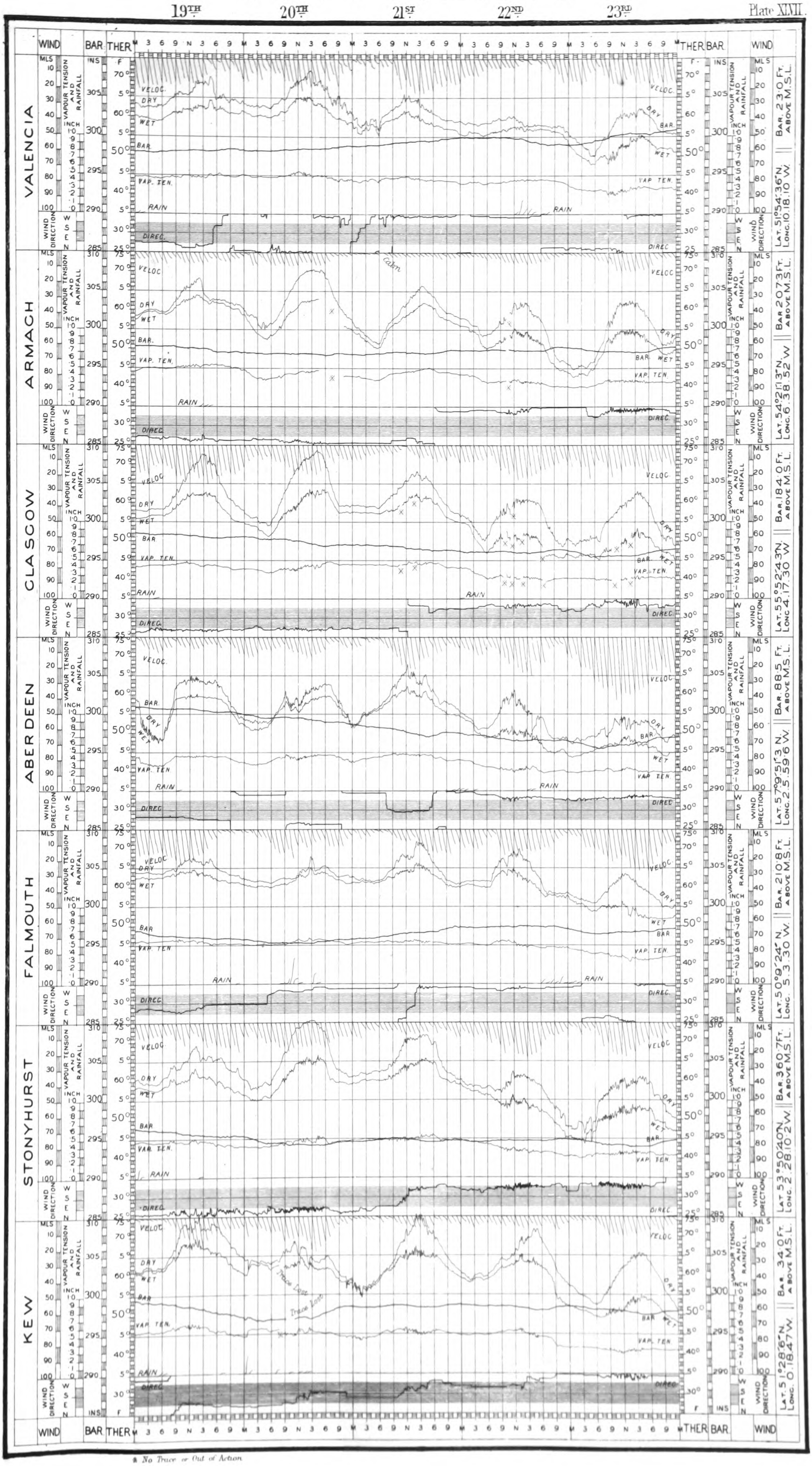
Plate XLVI



No Trace or Out of Action.

AUGUST — 1876.

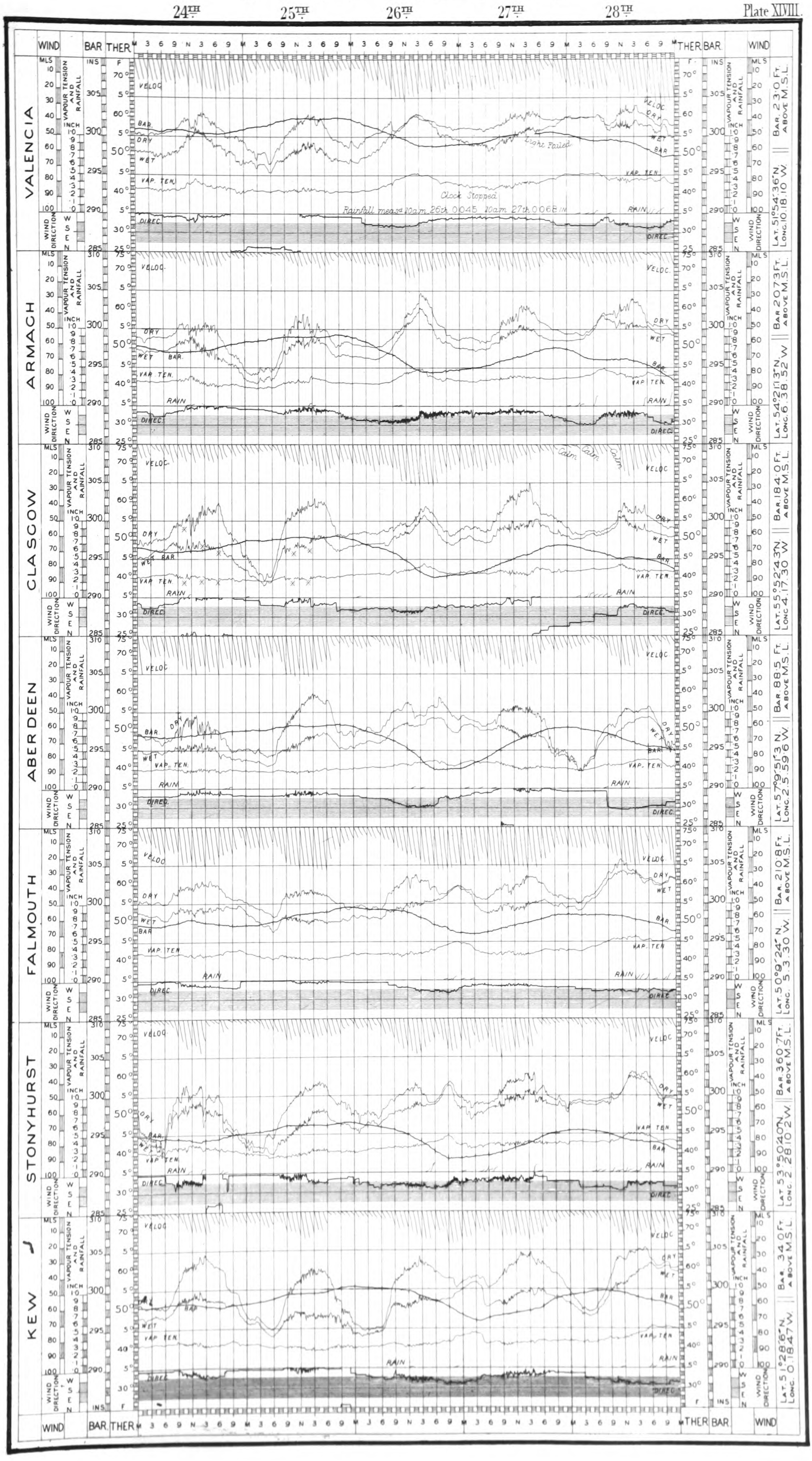
Plate XLVII.



* No Trace or Out of Action

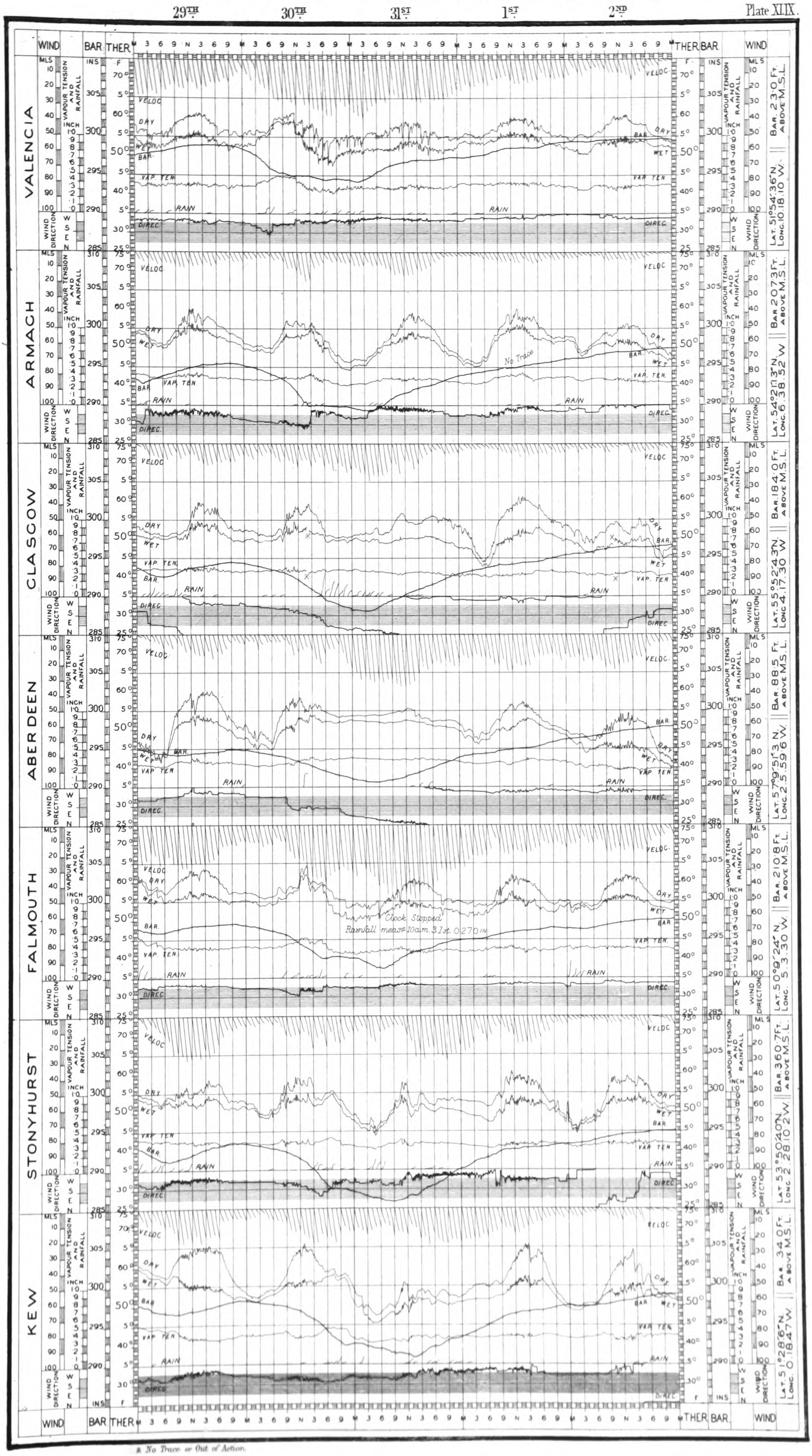
AUGUST — 1876.

Plate XLVIII.



AUGUST & SEPTEMBER_1876.

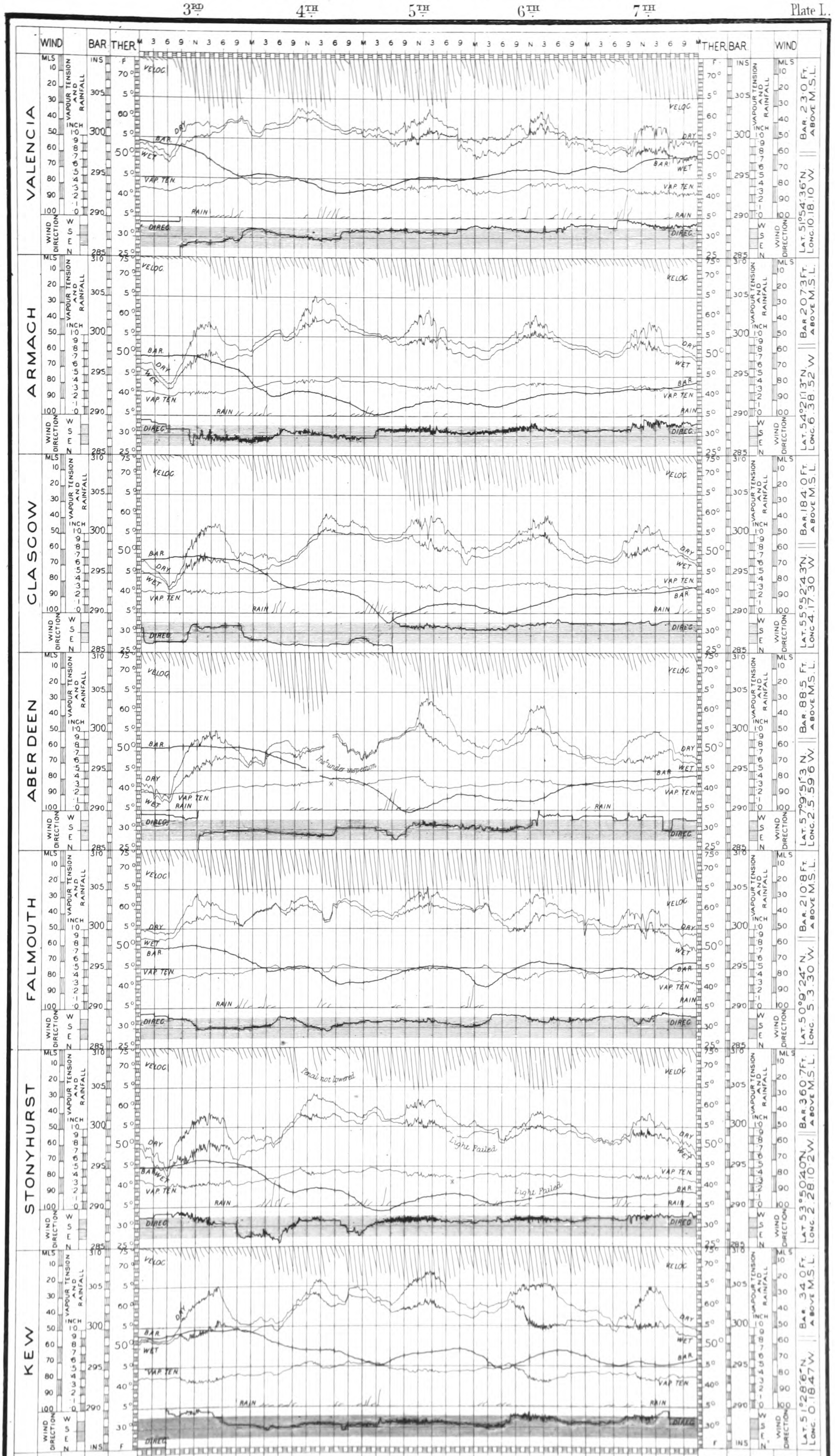
Plate XLIX.



* No Trace or Out of Action.

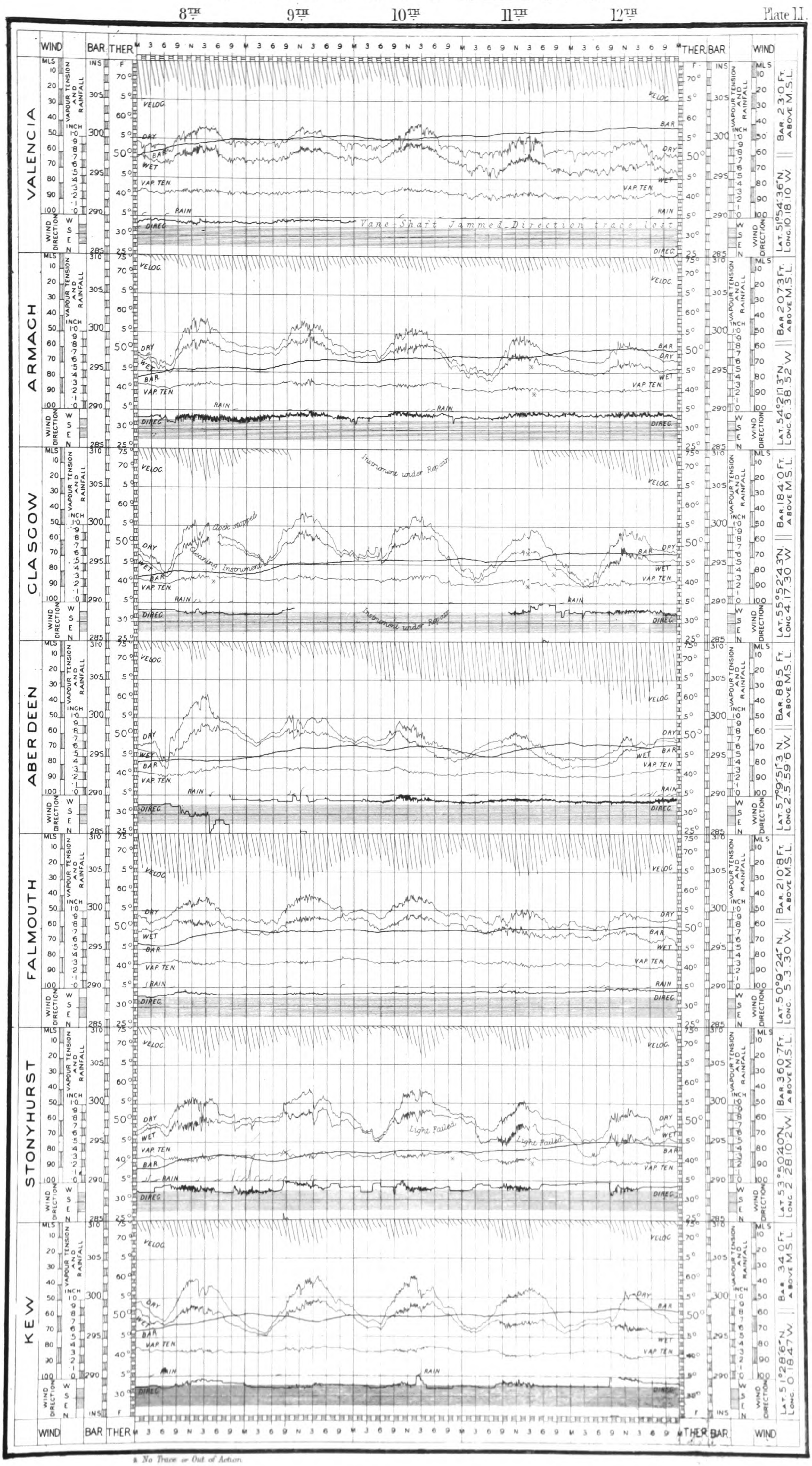
SEPTEMBER — 1876.

Plate L.



* No Trace or Out of Action

SEPTEMBER — 1876.



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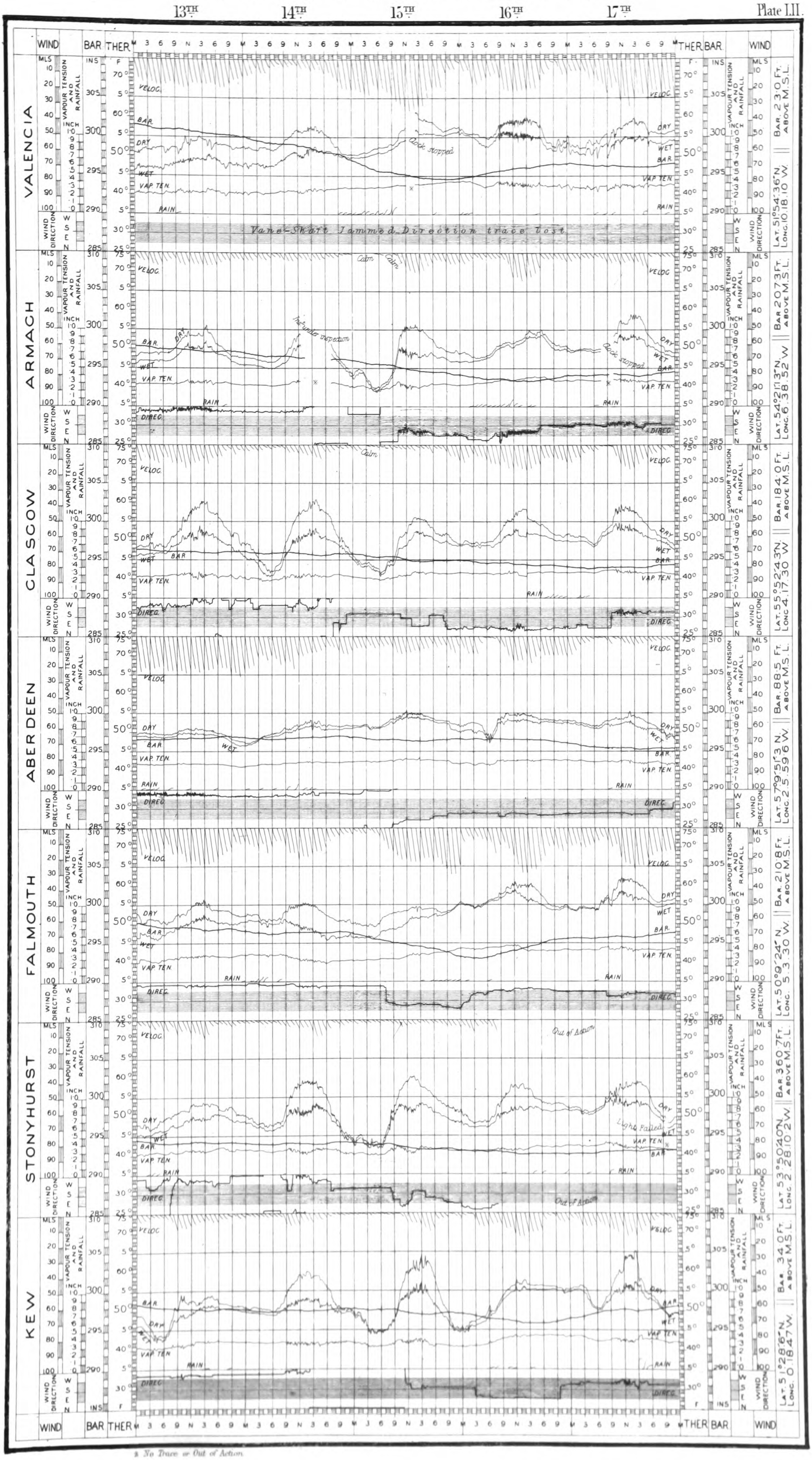
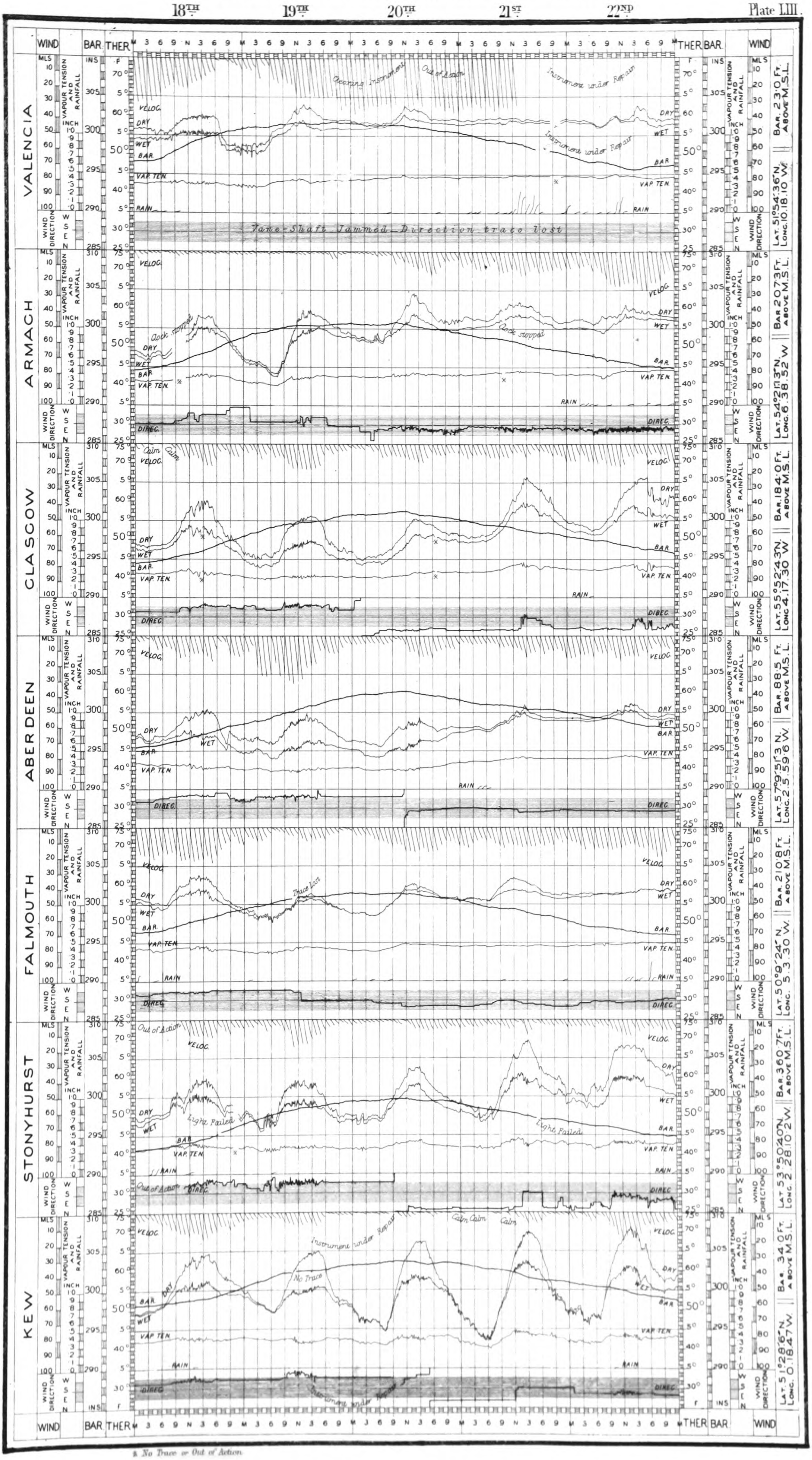
SEPTEMBER — 1876.



× No Trace or Out of Action.

SEPTEMBER — 1876.

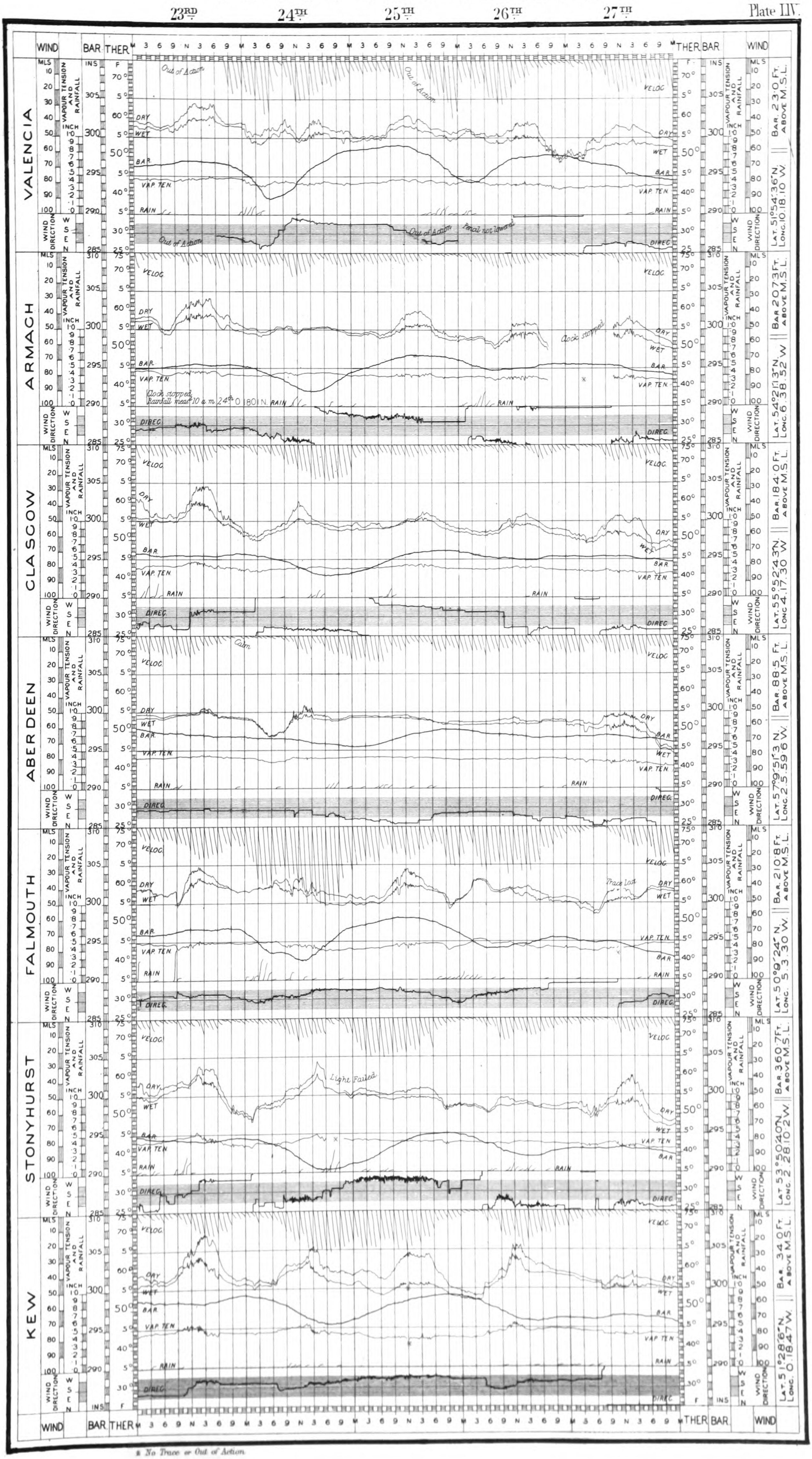
Plate LIII.



* No Trace or Out of Action

SEPTEMBER — 1876.

Plate LIV.



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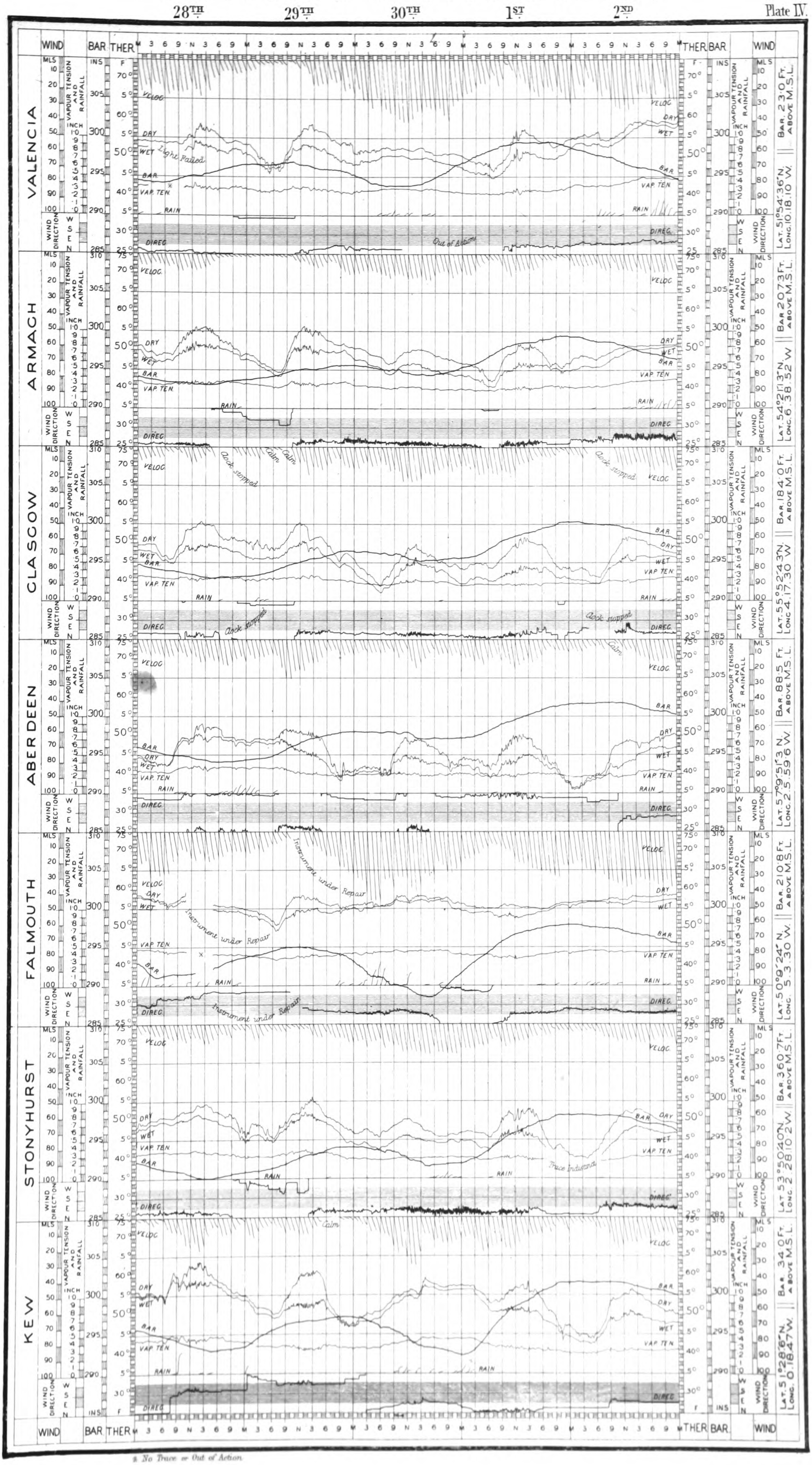
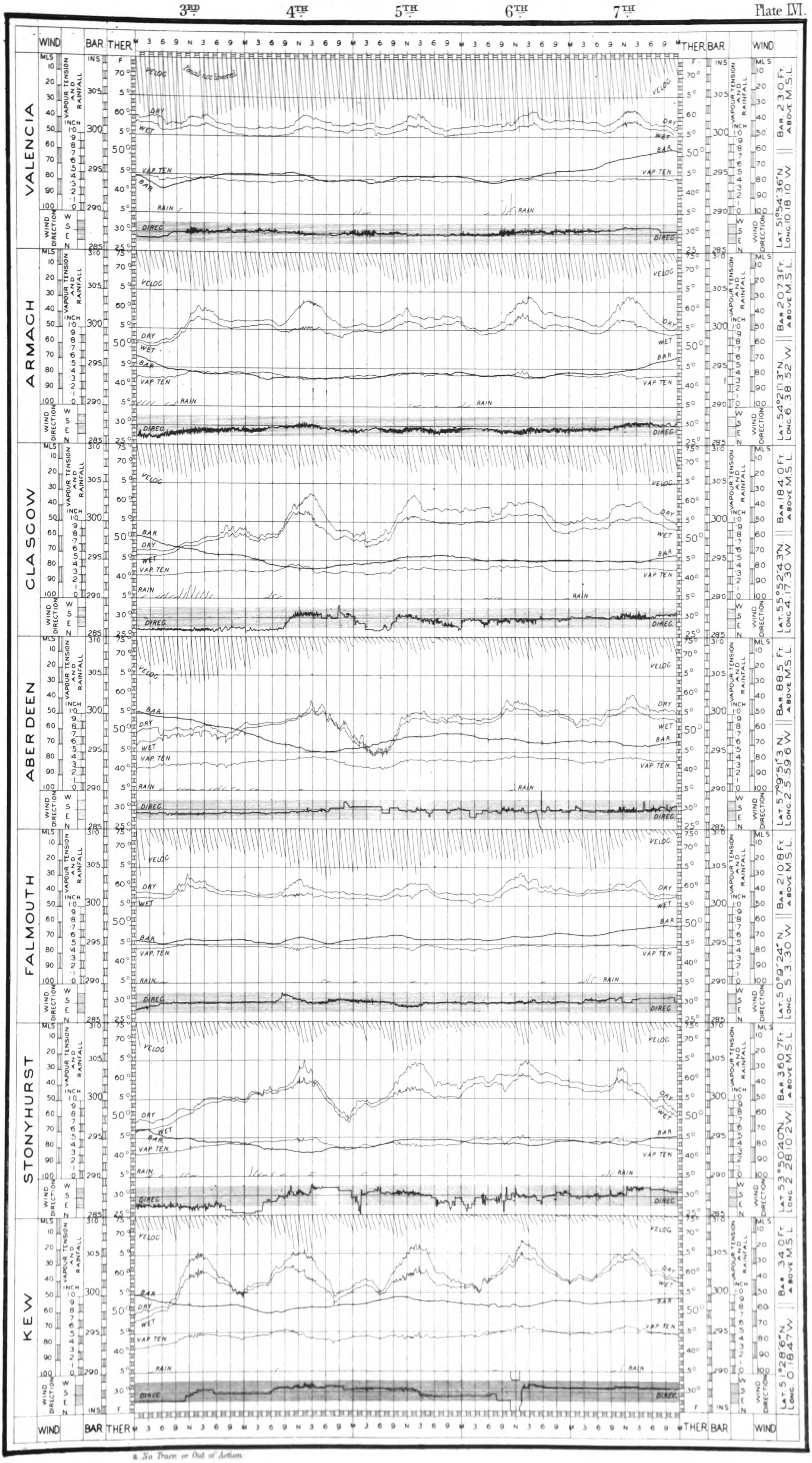
SEPTEMBER & OCTOBER — 1876.



x No Trace or Out of Action

OCTOBER — 1876.

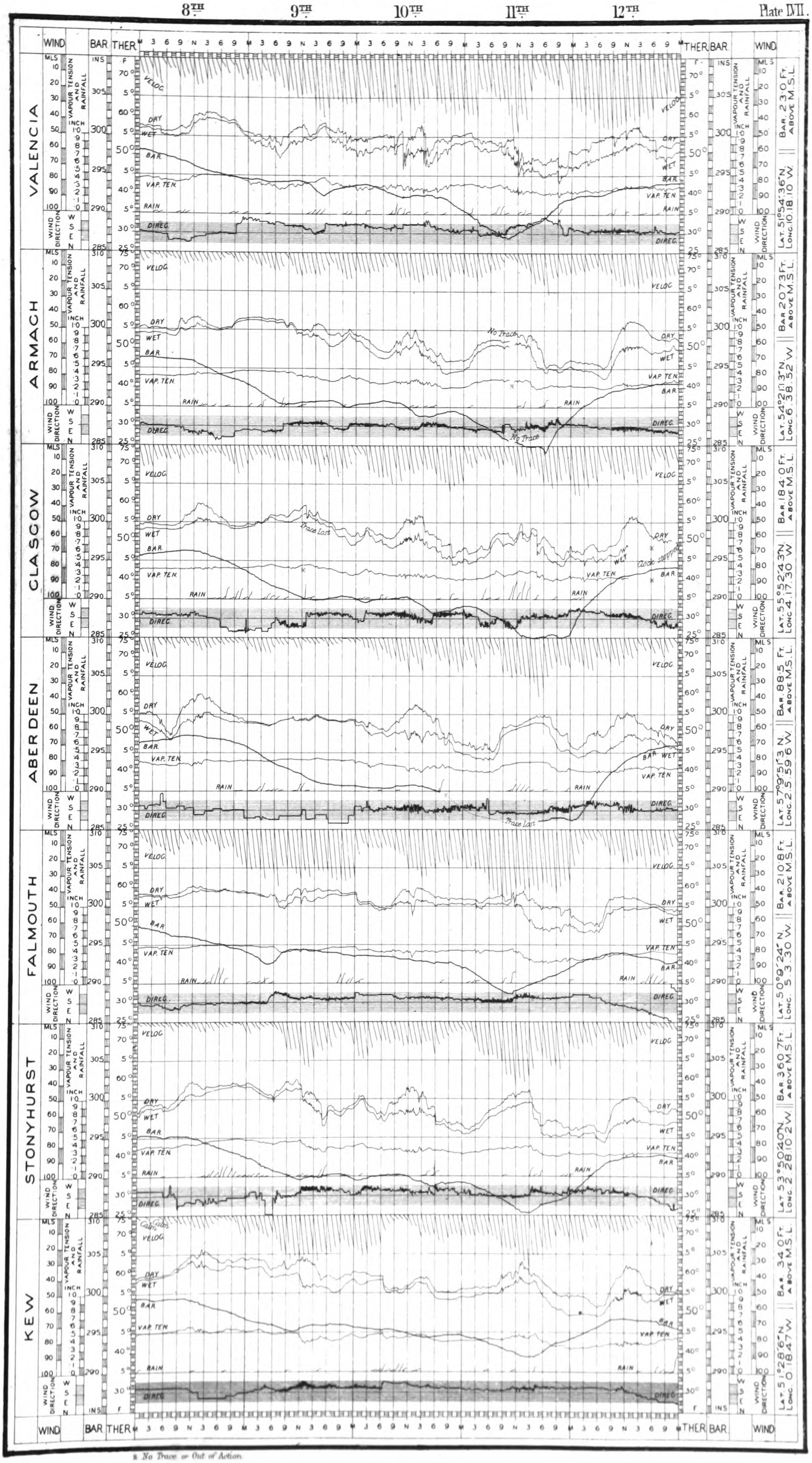
Plate LVI.



§ No Trace or Out of Action

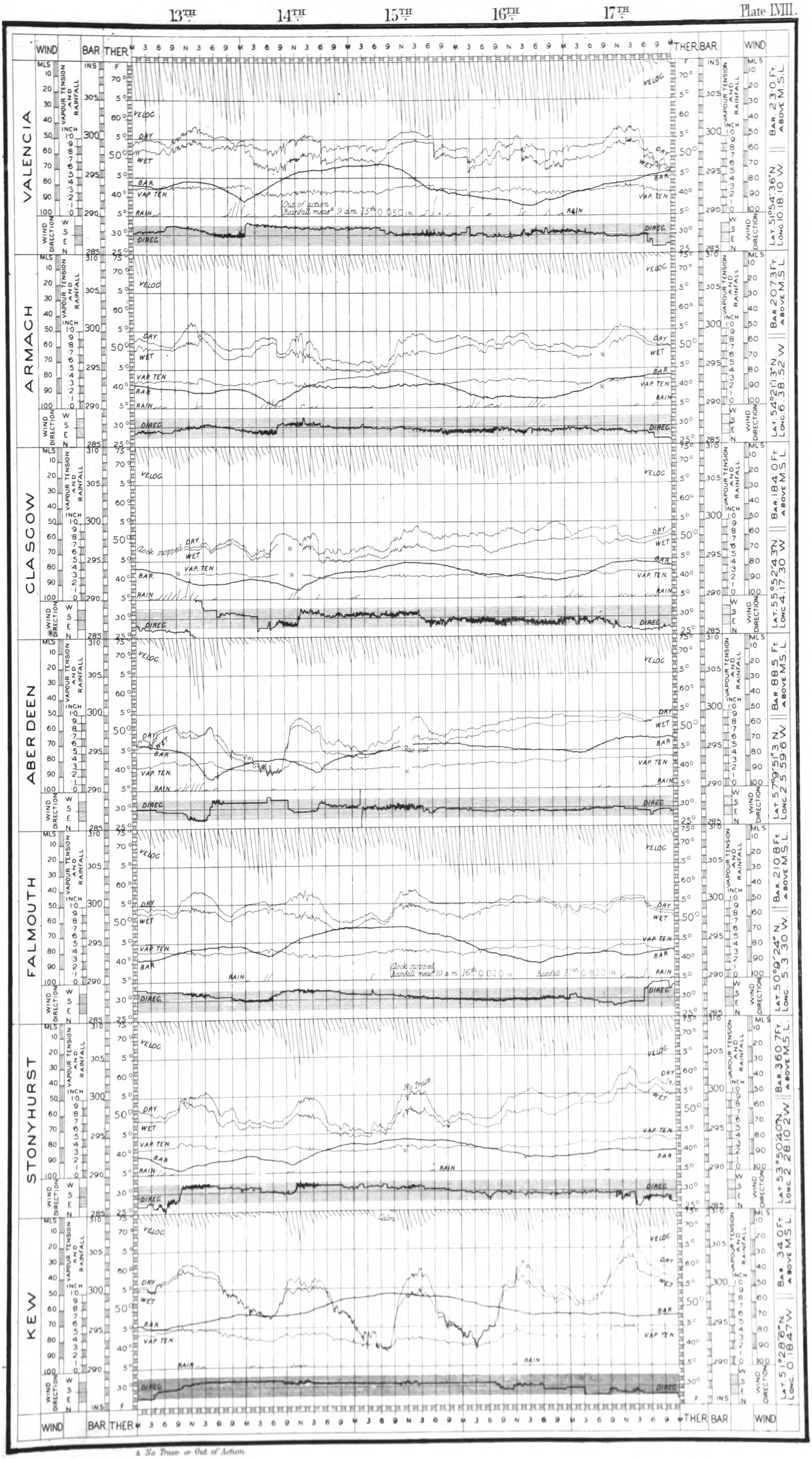
OCTOBER — 1876.

Plate LVII.



* No Trace or Out of Action.

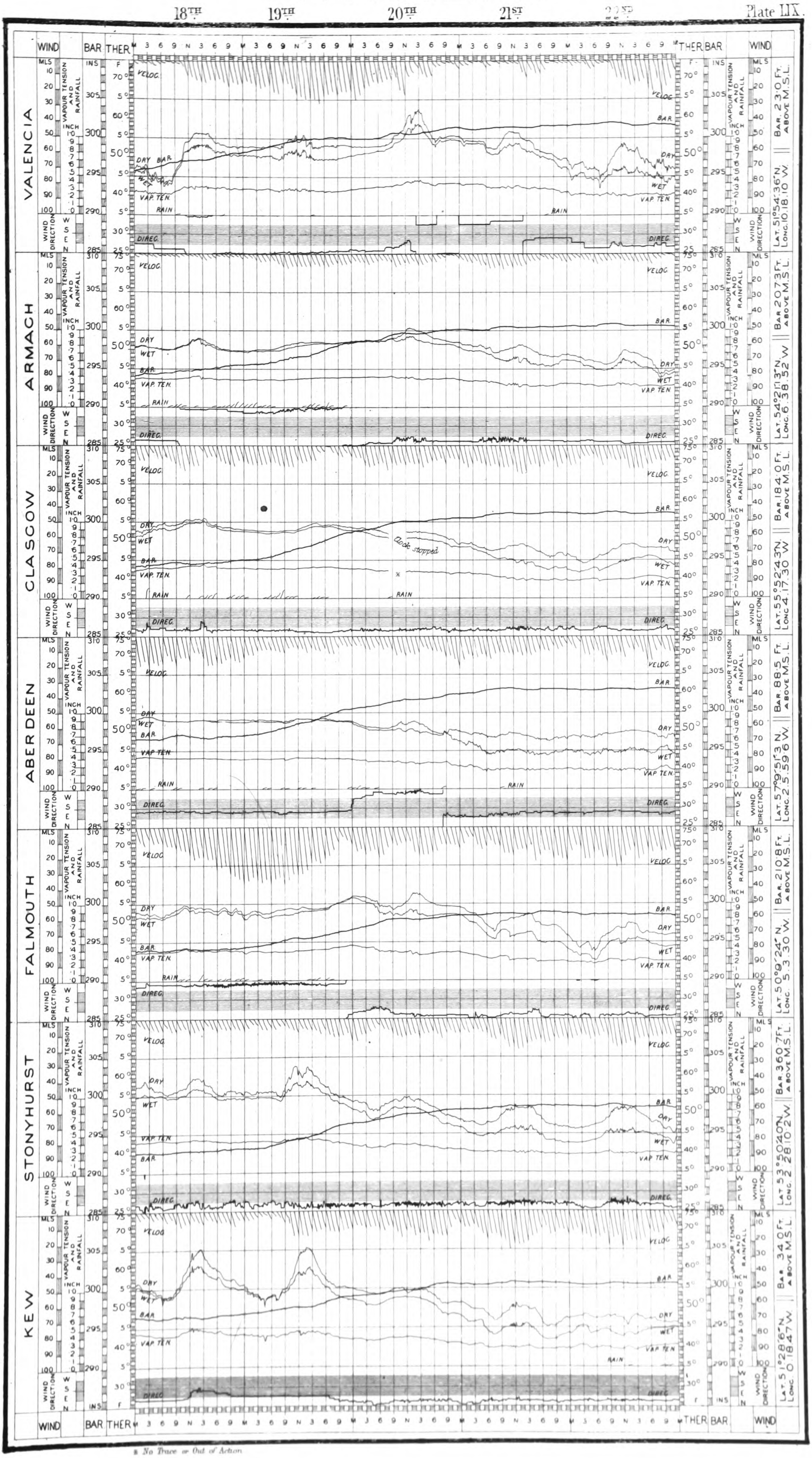
OCTOBER — 1876.



x No Trace or Out of Action

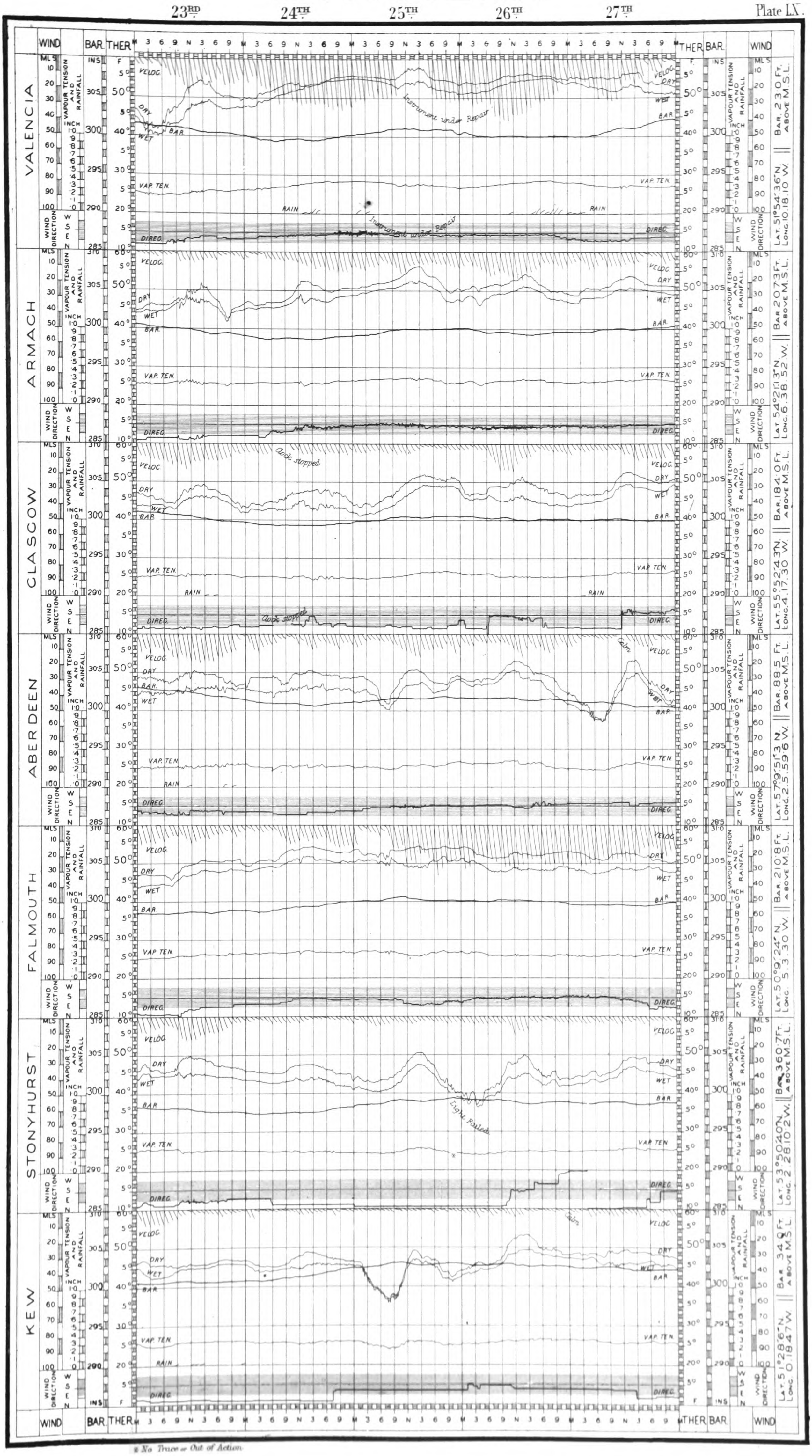
OCTOBER — 1876.

Plate LIX.



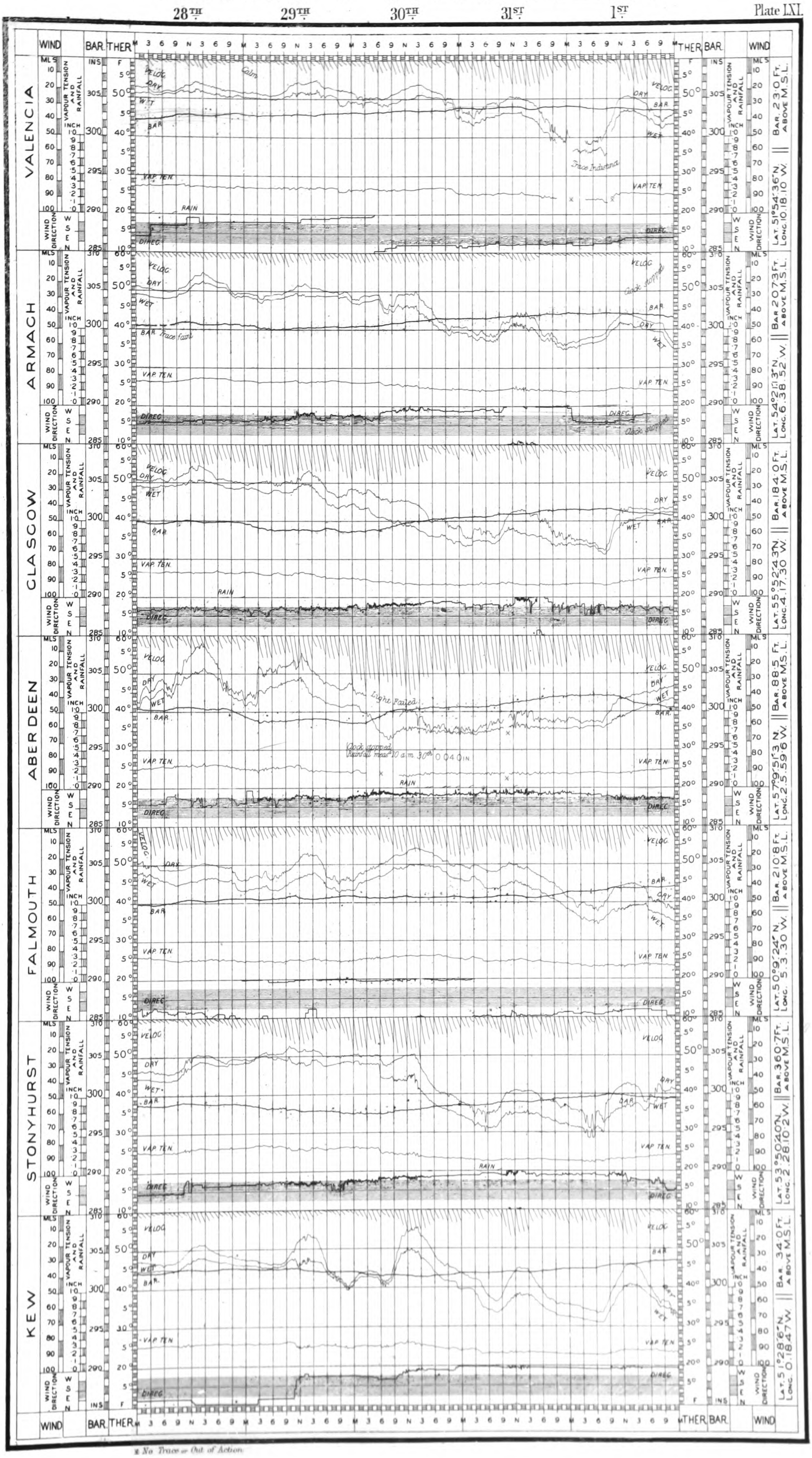
× No Trace or Out of Action

OCTOBER — 1876.



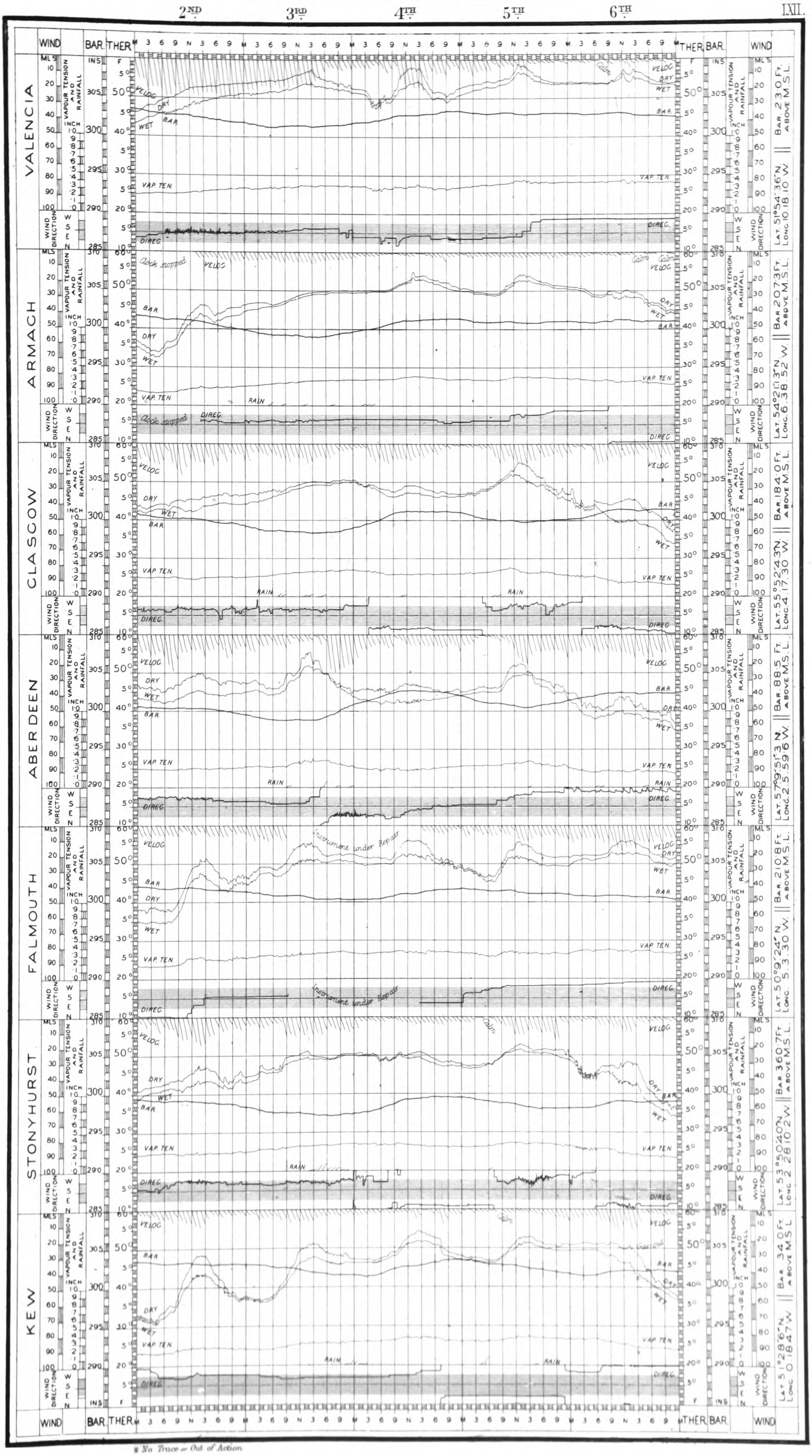
* No Trace or Out of Action

OCTOBER & NOVEMBER — 1876.



x No Trace or Out of Action.

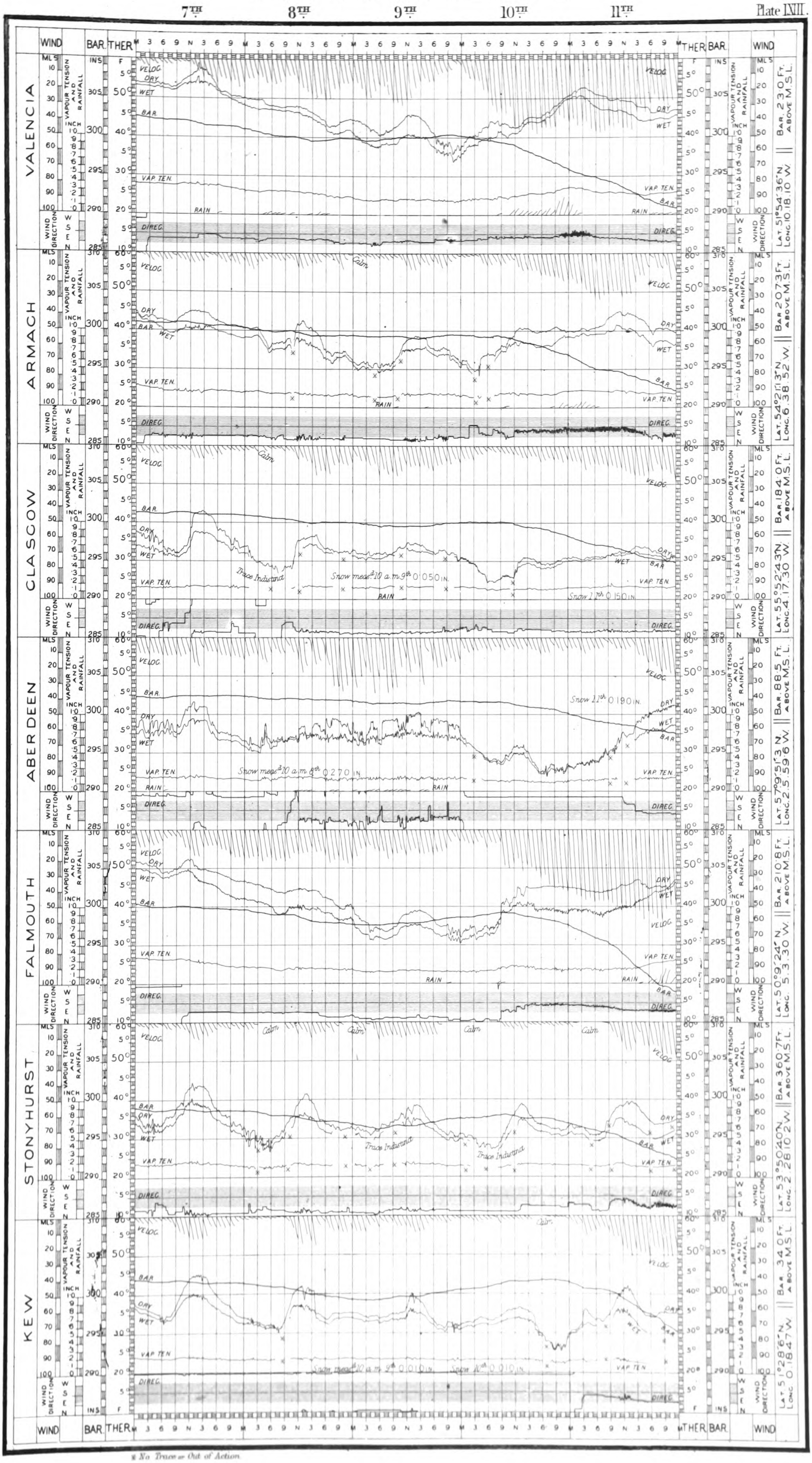
NOVEMBER — 1876.



✱ *No Trace = Out of Action*

NOVEMBER — 1876.

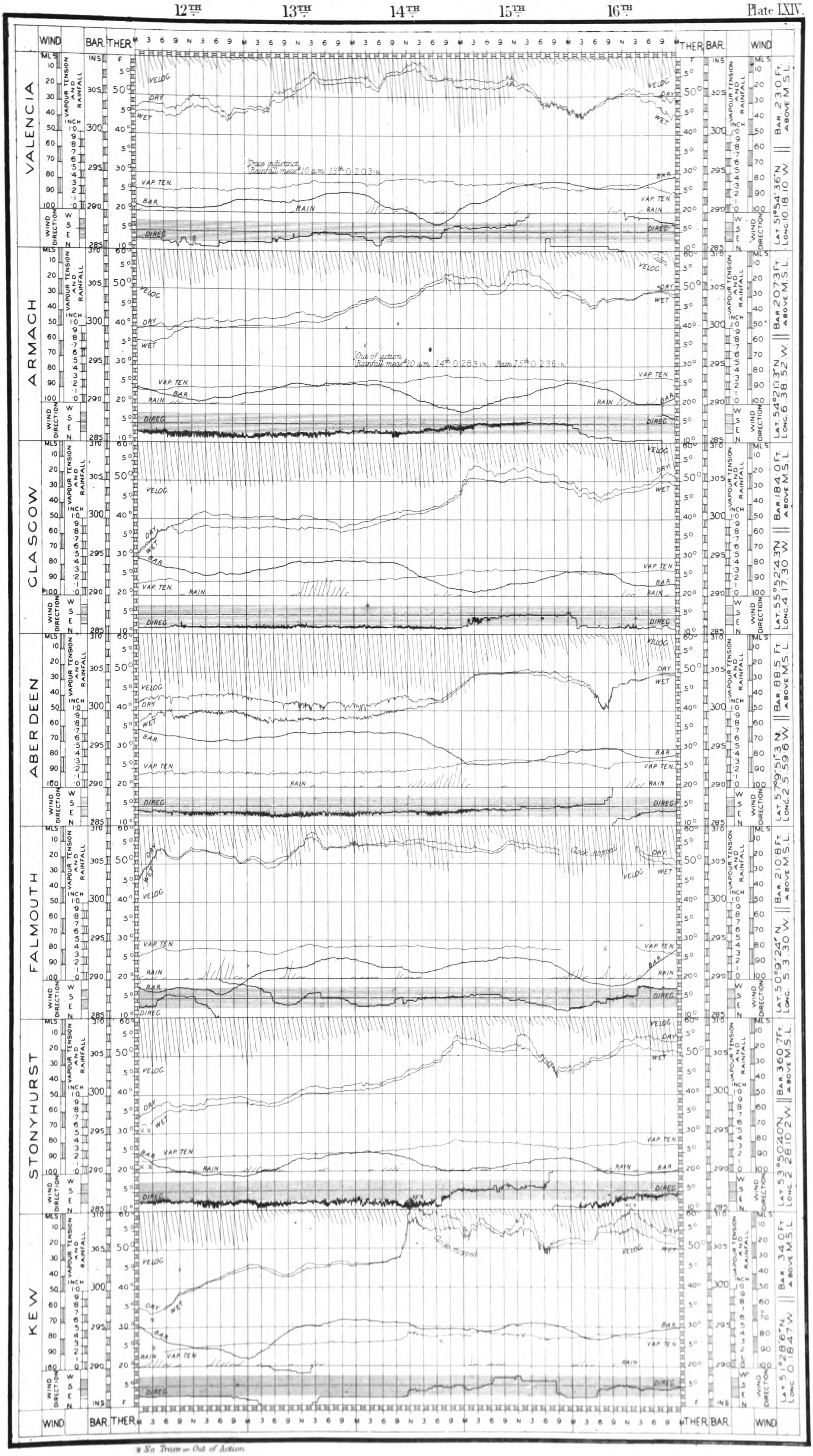
Plate LXII.



* No Trace or Out of Action.

NOVEMBER — 1876.

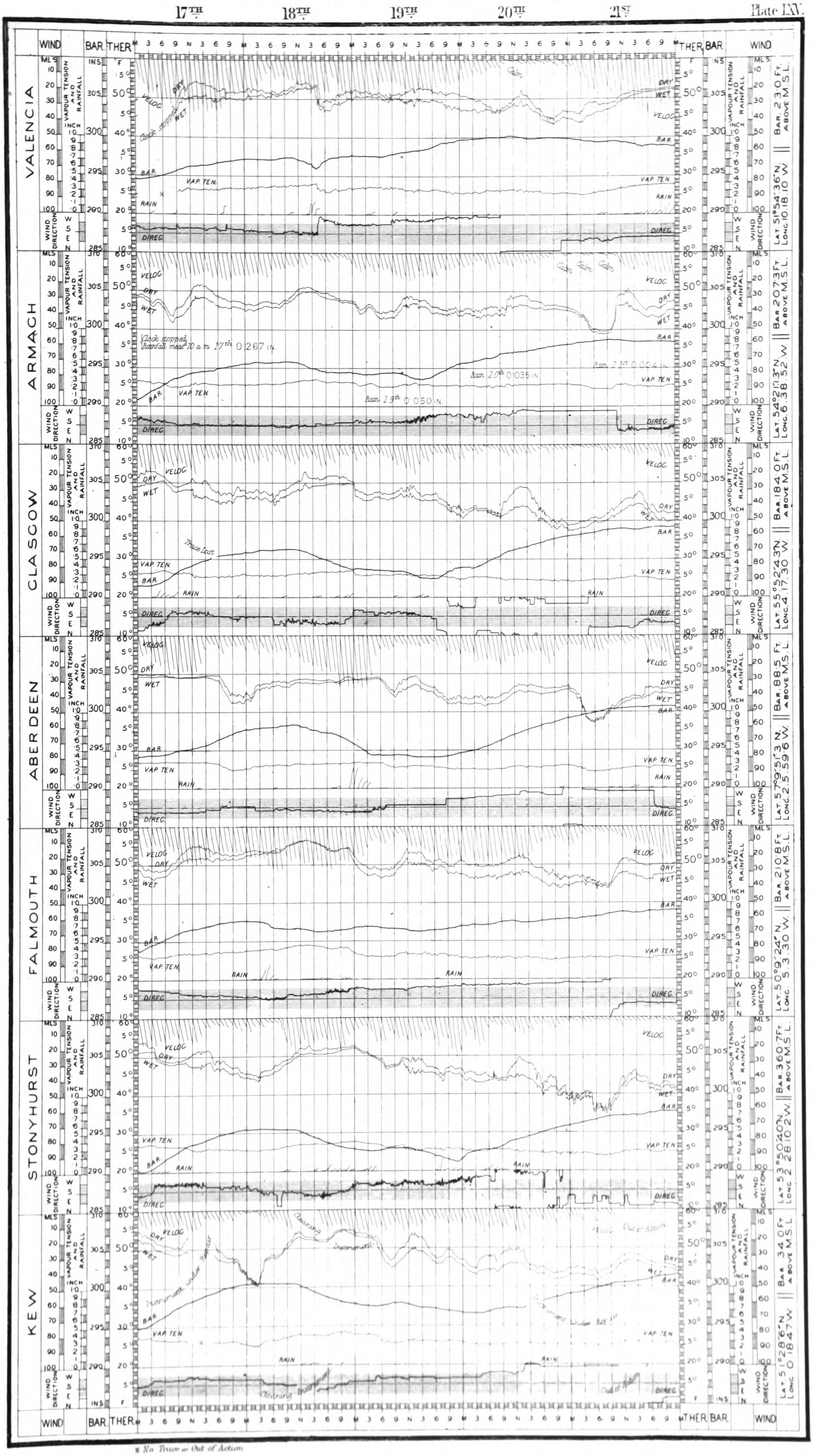
Plate LXIV.



* No Trace or Out of Action

NOVEMBER — 1876.

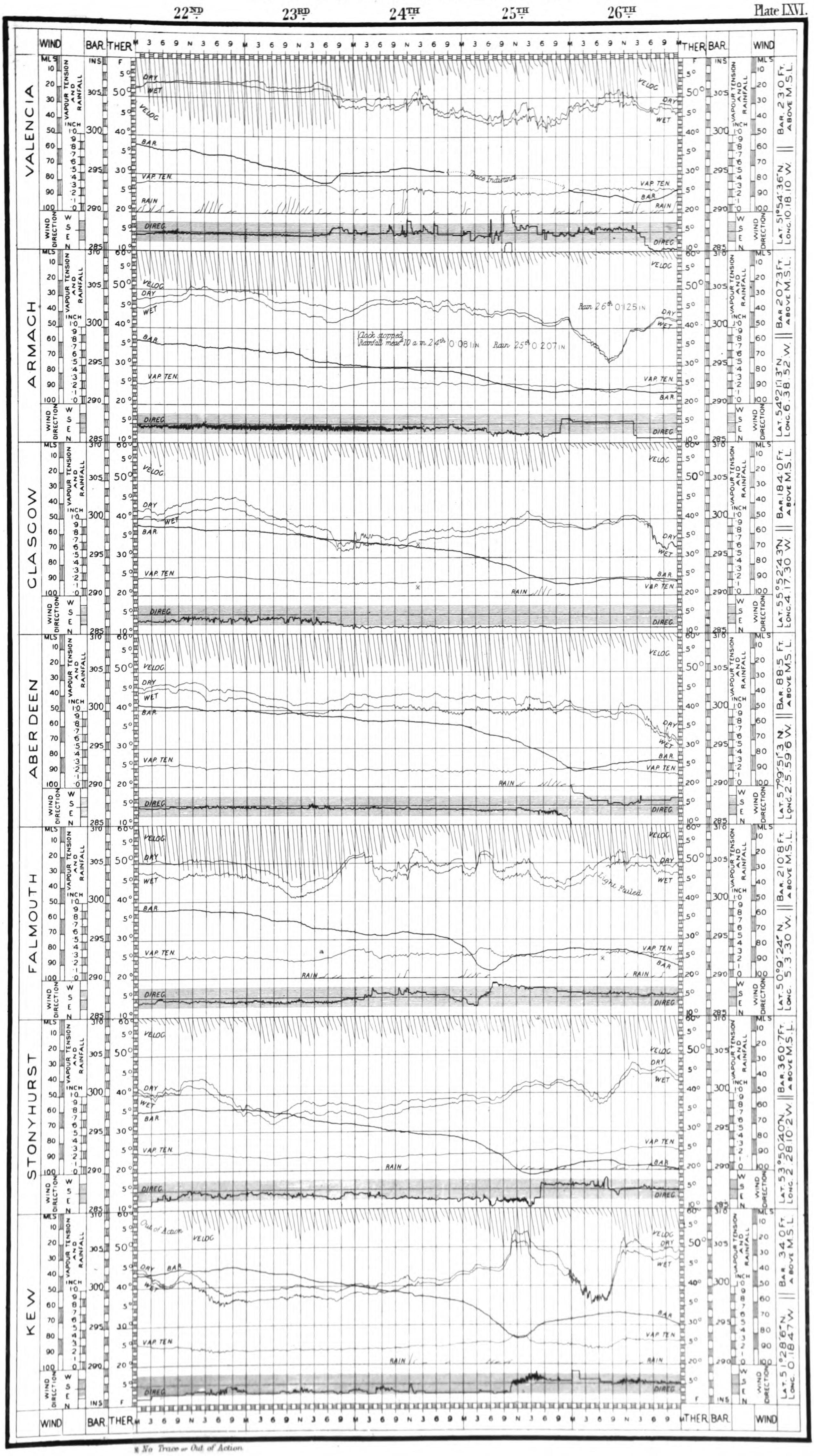
Plate LXV.



✻ No Trace or Out of Action

NOVEMBER — 1876.

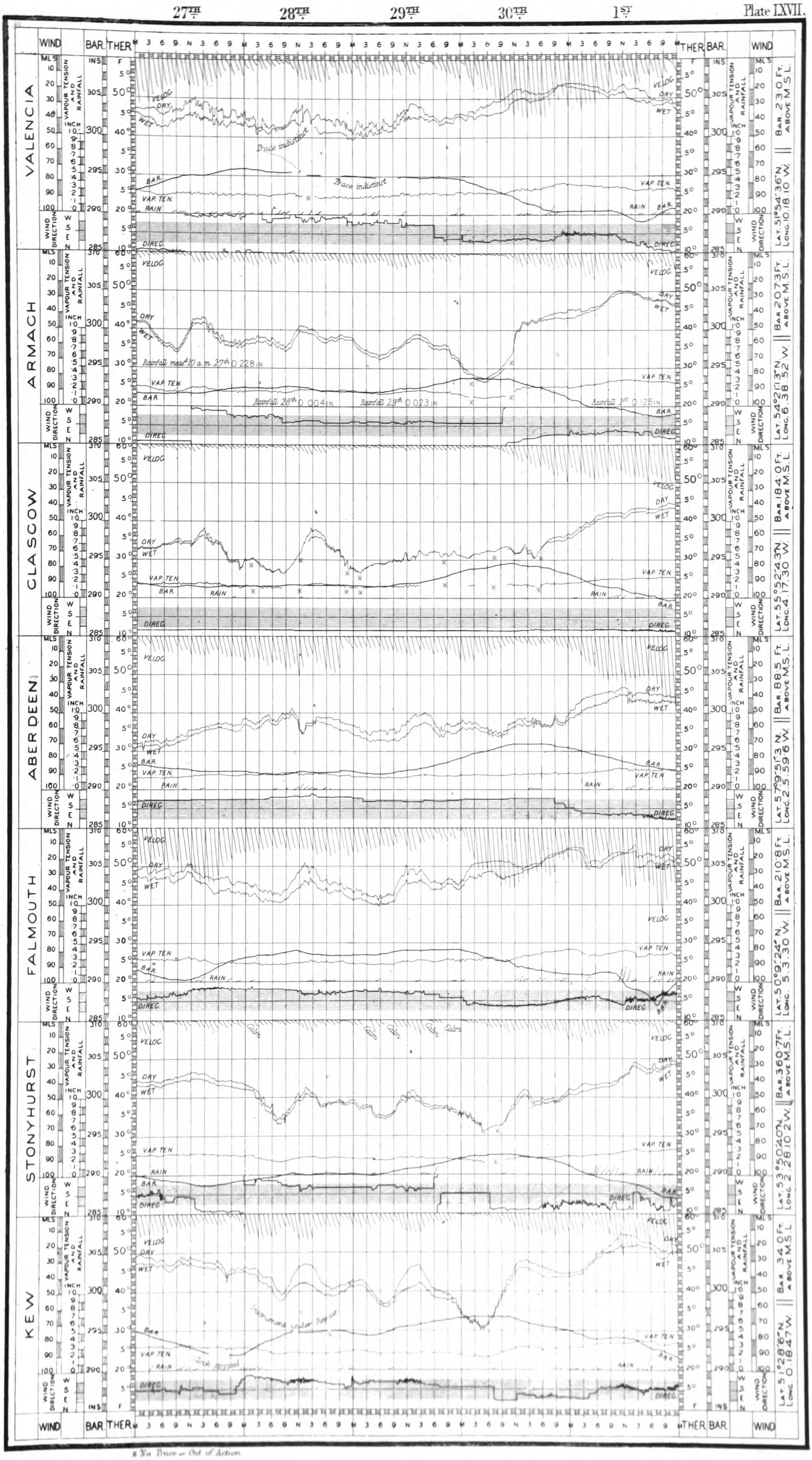
Plate LXVI.



x No Trace or Out of Action.

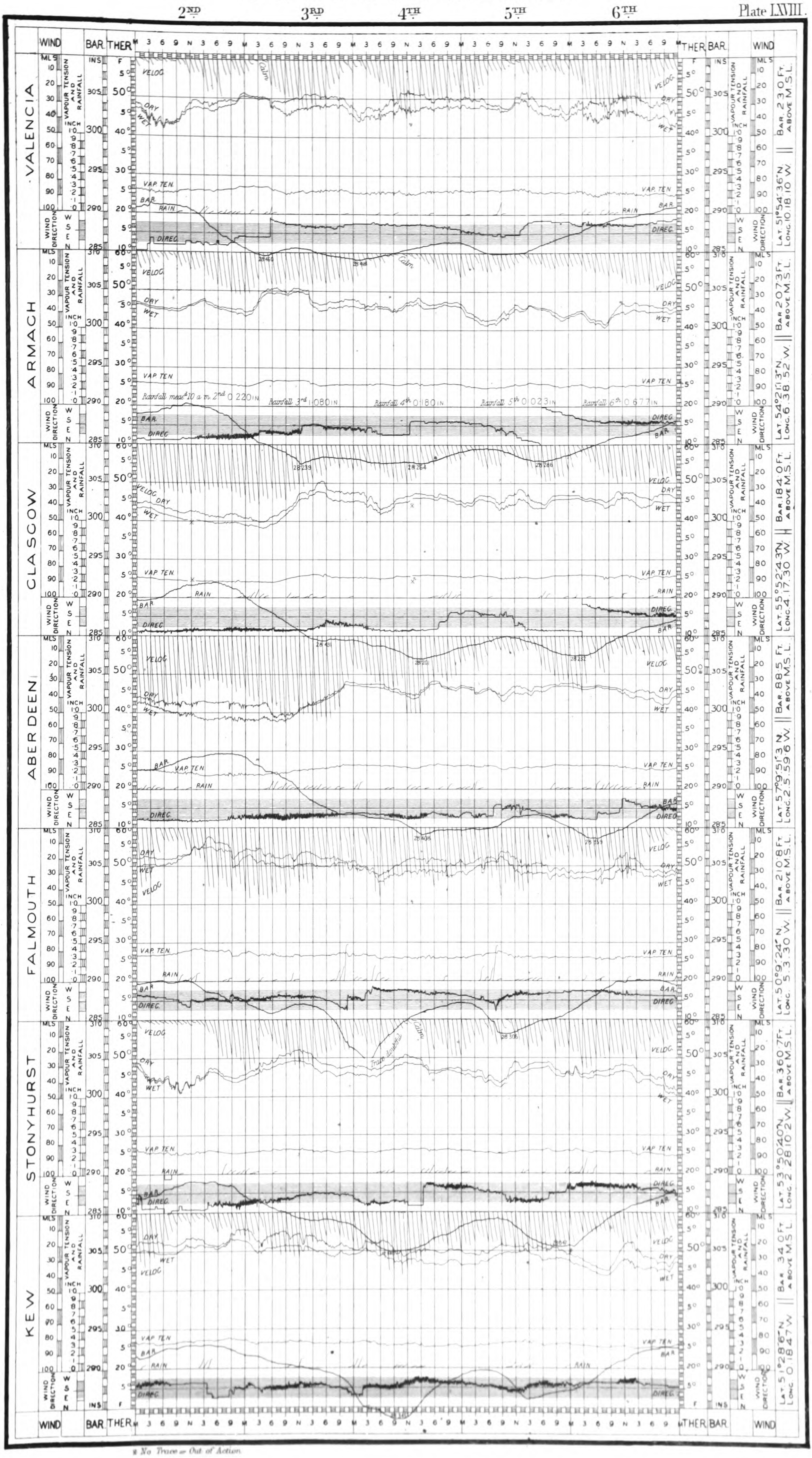
NOVEMBER & DECEMBER 1876.

Plate LXVII.



* No Trace or Out of Action.

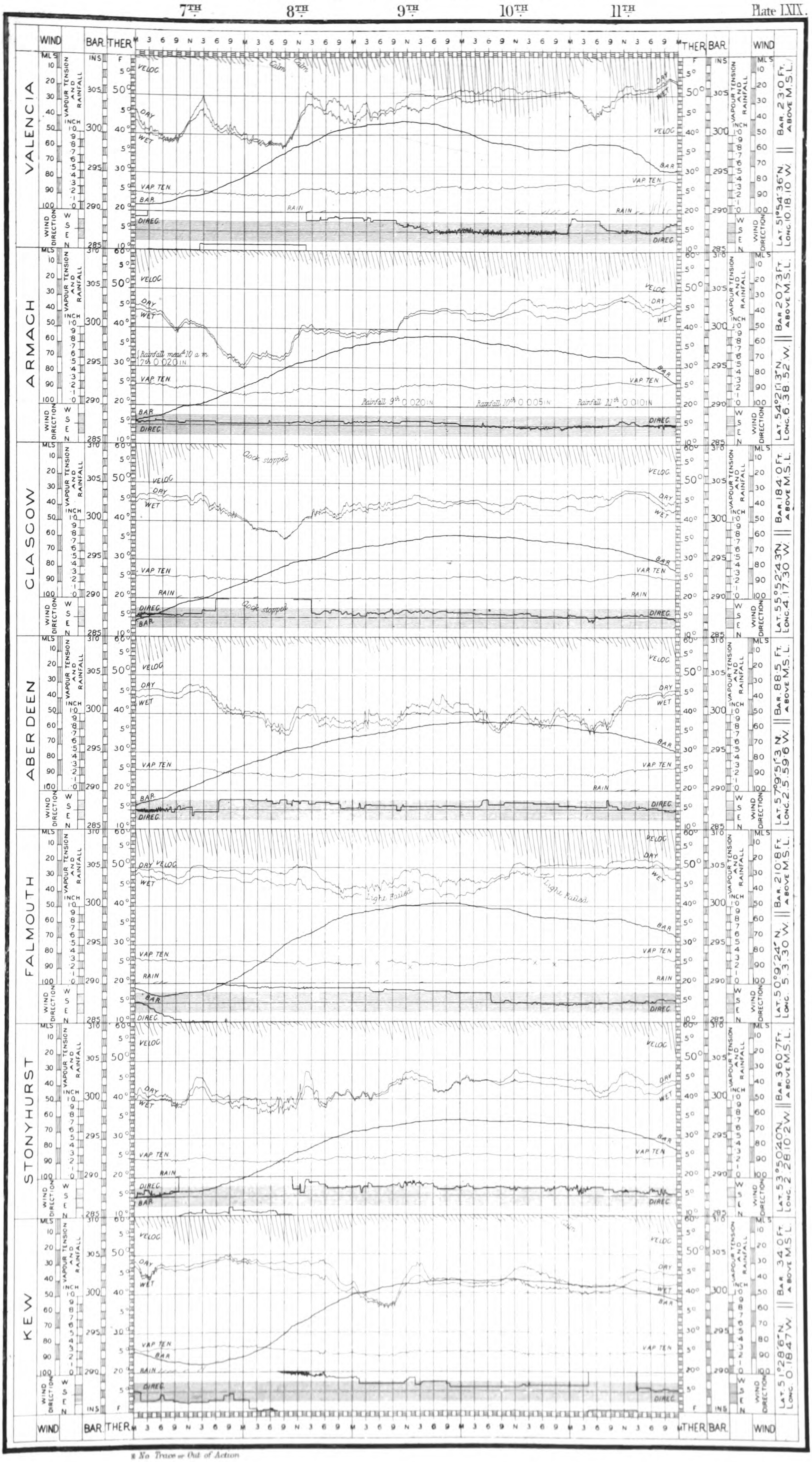
DECEMBER — 1876.



* No Trace = Out of Action.

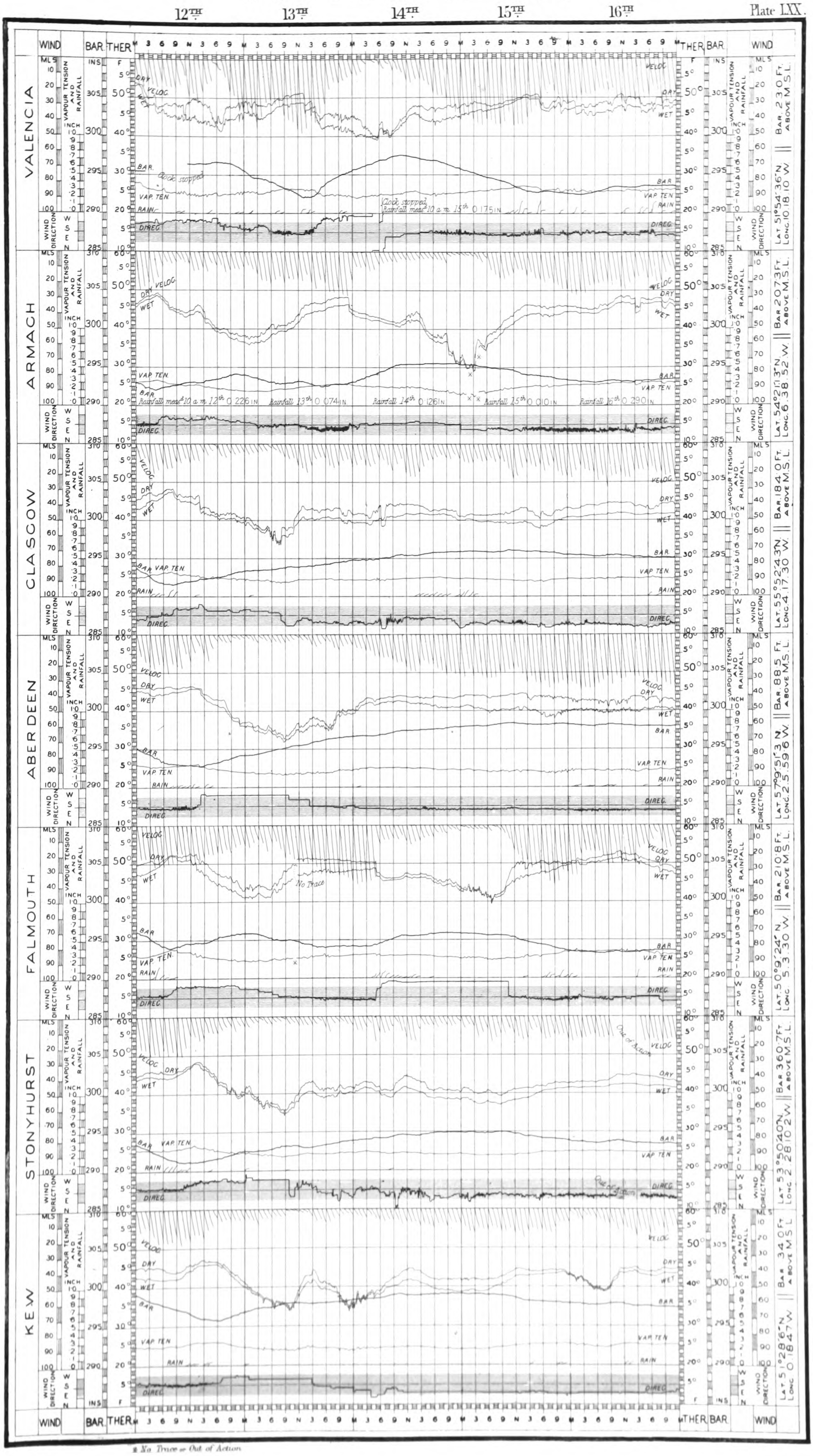
DECEMBER — 1876.

Plate LXIX.



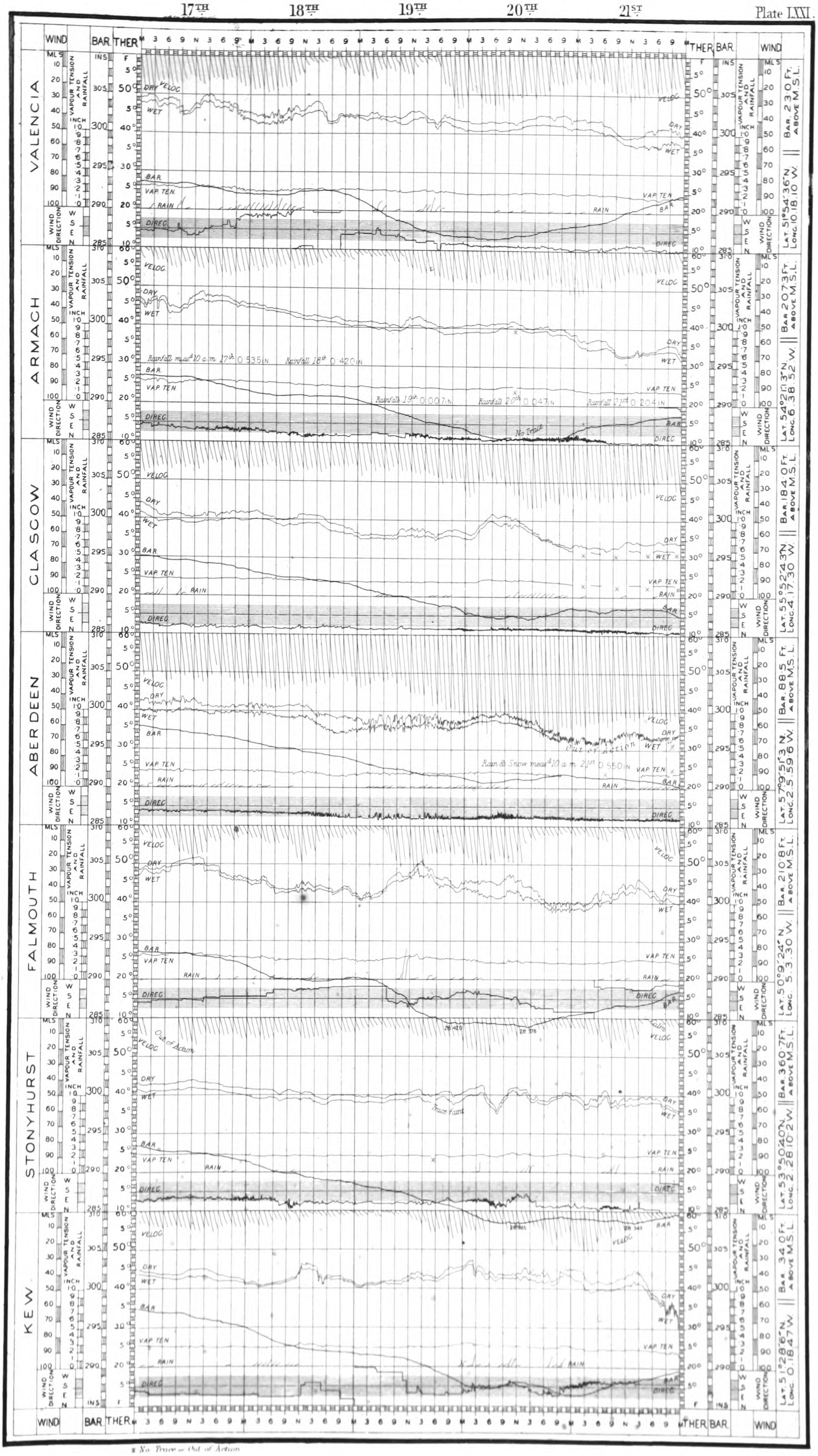
* No Trace or Out of Action

DECEMBER — 1876.



x No Trace = Out of Action

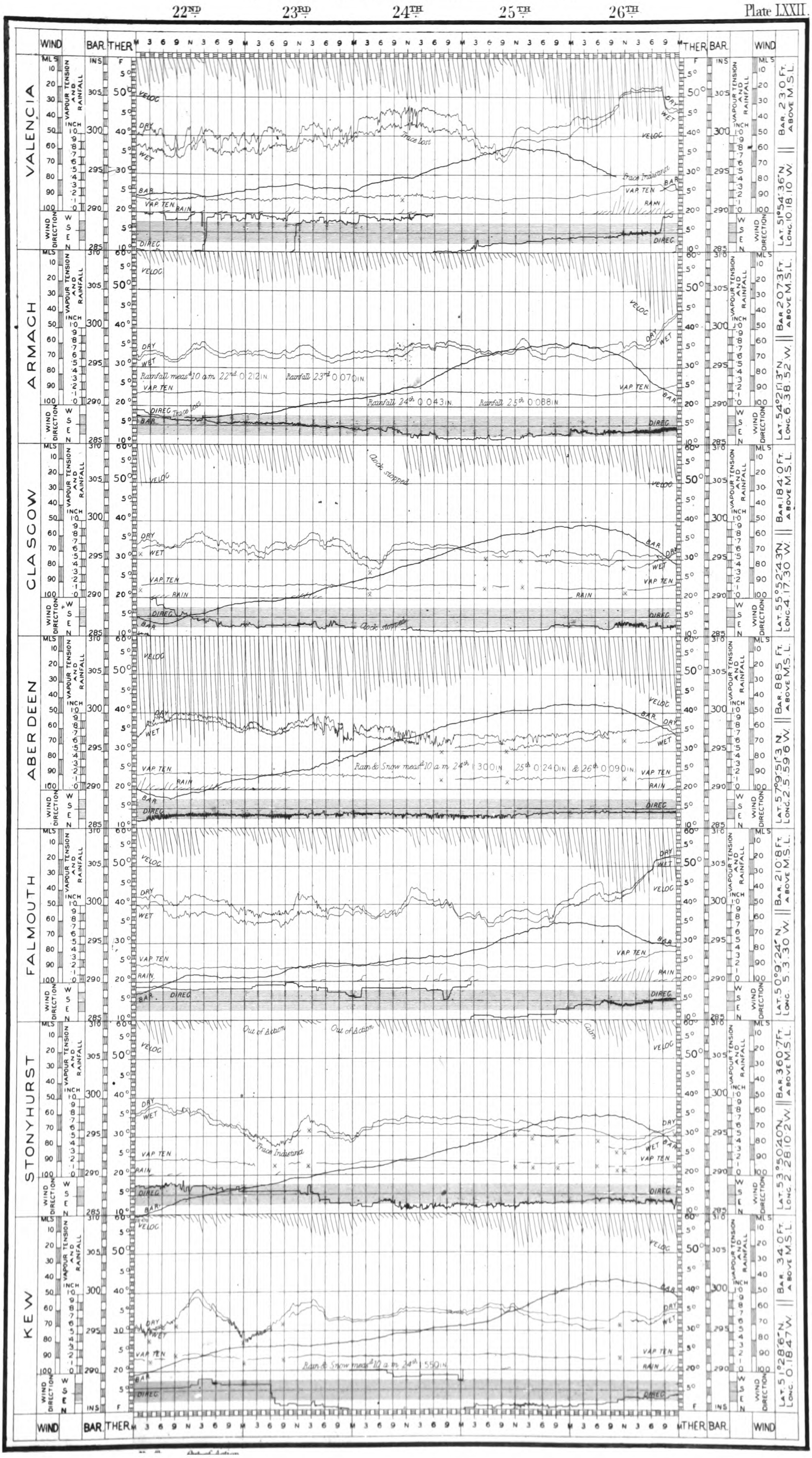
D E C E M B E R — 1 8 7 6.



x No Trace — Out of Action

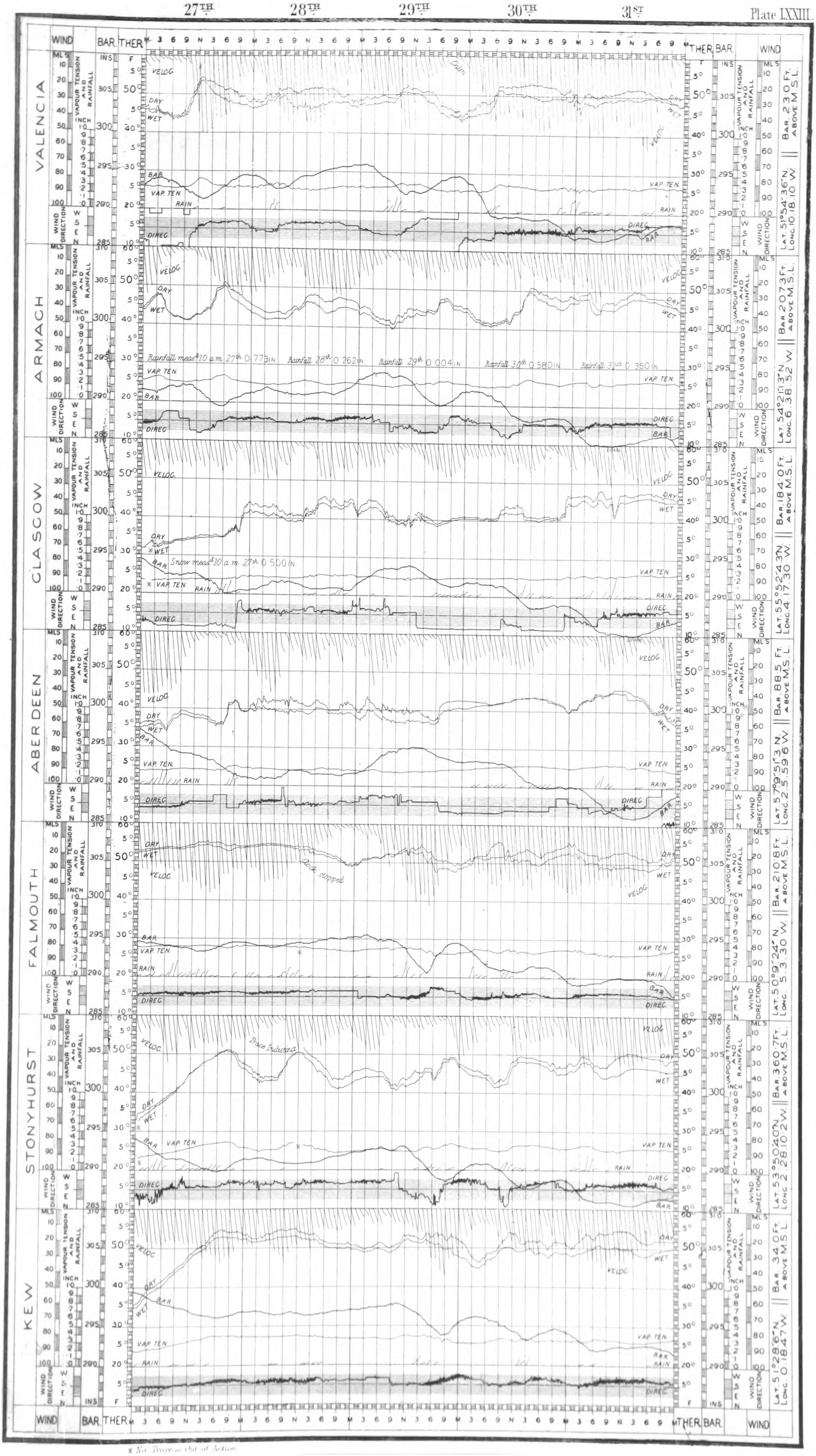
DECEMBER 1876.

Plate LXXII.



DECEMBER — 1876.

Plate LXXIII.



× No Trace or Out of Action